DESIGNS ★ FINANCING ★ CONSTRUCTION ★ EQUIPMENT ★ FURNITURE & DECORATION

Small HOMES Guide

25¢

Planning for DEFENSE and the FUTURE

How to get PRIORITIES

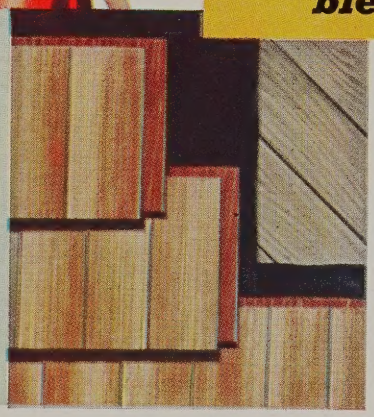
Howard Chandler Christy

Waldo McKinney, Architect, Seattle

Provide adequate insulation, charm and sturdiness at low cost with double-coursed Cedar Shingle sidewalls

Double-Coursing is Economical

Because the Cedar Shingles in double-coursing are laid with a very wide weather exposure and because it is possible to use No. 2 grade for the exposed course and No. 3 for the concealed course, great economy is effected over other sidewalls of similar quality, sturdiness and attraction.



Easy to Rejuvenate by Double-Coursing

Old homes, garages, stores and auto camps can easily be made modern and attractive with double-coursed Cedar Shingles right over the old sidewalls. Then again, Shingles are the most practical material for new roofs and for over-roofing right over the old roof. Ask your lumber dealer or contractor for particulars.

- Sidewalls covered with double-coursed *Certigrade* Cedar Shingles, and given a very wide exposure, create a strikingly attractive appearance . . . adaptable to the Colonial and Cape Cod as well as today's modern small home designs.

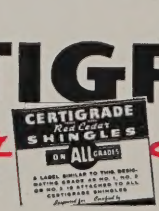
Double-coursing on solid *wood* sheathing requires no other insulation due to the known natural insulative qualities of genuine Red Cedar. Double-coursing gives the appearance of much more expensive construction and the deep butt shadow lines, due to the slight overlapping of the shingles, provide the homespun charm of traditional American architecture.

Though double-coursing is quite simple, we will gladly send you technical data for consultation with your architect or contractor.

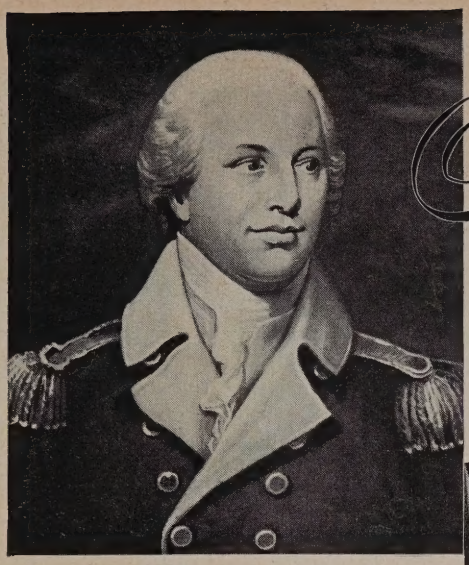
Write Red Cedar Shingle Bureau, Seattle, Washington, U. S. A., or Vancouver, B. C., Canada

CERTIGRADE

Red Cedar Shingles



SOLD EVERYWHERE BY LUMBER DEALERS



"... great as a soldier ... immaculate as a friend ..."

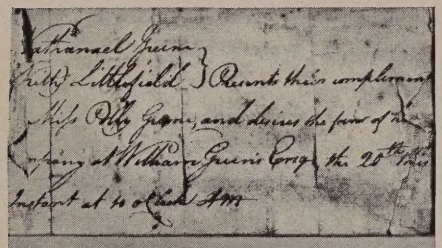
Nathanael Greene

A New England Blacksmith became a Southern Hero

"If thee must engage in this carnal warfare in defence of thy country, never let me hear of thee being wounded with thy back to the enemy." This is the stern admonition Mary Mott Greene is said to have given her son, whose Quaker ancestors helped establish Rhode Island.

Greene's birthplace in Warwick, Rhode Island, showing the forge in the foreground

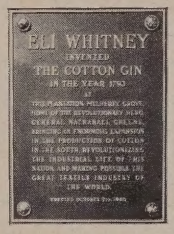
Born August 7, 1742 at Potowomut, Warwick, Rhode Island, Nathanael Greene was permitted only an elementary education but trained, like his brothers, to work at the old forge mill. In spite of this scant formal schooling, Nathanael educated himself to the point where for relaxation he read the Latin poets in the original by the light of the camp fire. When about 32 he married Kitty Littlefield of Block Island. She, who was "singularly lovely ... and animated," had a buoyant influence upon Greene, especially during difficult military days. General Greene loved to watch her dancing with his dear friend and fellow officer, "Mad Anthony" Wayne, "while the two of them flirted desperately." In the winter of 1778 George Washington danced for "four hours with Mrs. Greene without once sitting down."



Invitation in Greene's handwriting to his wedding with Catherine Littlefield, which took place at the home of his cousin, William Greene

At the news of fighting, Nathanael left for Boston and was placed in charge of troops after evacuation by the British. Active in the defense of New York, then with Washington at Trenton, and finally as commander of the Southern army, Greene evidenced true genius as a soldier, strategist and technician. After the War, for his great service in the cause of Independence, Georgia made a present to Greene of one of its finest plantations, Mulberry Grove. Greene took up his residence at Mulberry Grove late in 1785 and the following June died there of sunstroke.

A few years after her husband's death Mrs. Greene gave shelter to a friend of the family tutor, a Yale graduate named Eli Whitney who had come south but was disappointed in not getting a teacher's position. At Mulberry Grove, with the aid and encouragement of Mrs. Greene, Eli Whitney conceived and completed his cotton gin. The house at Mulberry Grove remained standing until the year 1864 when, lying in the path of Sherman's army, it was destroyed in the March to the Sea.



Plaque dedicated to Eli Whitney at Mulberry Grove, Ga., in 1940

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Creed of Small HOMES Year Book
To Present To Mr. and Mrs. America authoritative and unbiased information on complete homes of good design, soundly built with quality products. This to the end that more Americans may realize the happiness and security which invariably results from sensible home ownership.
DEFENSE
CONTENTS
ISSUE

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Here are presented 42 complete small home designs, all illustrated with exteriors and floor plans. 12 are shown in full color. These are particularly selected as adaptable to defense areas. Working drawings and specifications may be obtained from local lumber dealers.

FINANCING SECTION 233
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CONSTRUCTION SECTION 239
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Small HOMES Guide

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"... THAT GOVERNMENT OF THE PEOPLE, BY THE PEOPLE AND FOR THE PEOPLE SHALL NOT PERISH FROM THE EARTH"—America goes forward in her DEFENSE PROGRAM! We are building ships and armaments to make the forces of freedom prevail—the strongest in the world! Thus we safeguard our basic freedoms and PROTECT OUR HOMES! To maintain this great heritage is the basic objective of the American People and of American Industry AS WE BUILD FOR DEFENSE.

Therefore

this Defense Edition is dedicated to all patriotic Americans who build homes during this emergency . . . who by so doing enlist in our vast Army of Defense Workers.

To overcome the tremendous housing shortage in our Defense Areas, 500,000 new homes must be built without delay. Old homes must be modernized.

Then truly can our Defense Workers stand steadfastly behind the uniformed forces of America and her allies . . . and fight for the CAUSE OF FREEDOM!

WE HAVE now over a million and a half men in our armed forces training for Defense! But modern warfare is that of man-power increased tenfold by machines! The shipyards of America are building cargo ships and destroyers in less than half the usual time . . . 700 manufacturers in 130 cities of 20 states are helping a typical corporation to make tanks . . . today about 1000 industrial concerns either make airplanes or supply the parts . . . factories are being expanded and new ones built—preparing the armaments to make the forces of *freedom* the strongest in the world!

This is the largest and most difficult production job ever tackled anywhere at any time. But free men have *rolled up their sleeves* and pitched in to perform this task *as only free men can!*

BUT it takes 20 defense workers to support *one* man in uniform. War today is a war of machines—and they must be *created quickly!*

When a new dive-bomber roars down the runway and takes off, another important step has been achieved in National Defense. But before this can be done, machine-tools must be made to equip the fac-

500,000 MODERATE-COST HOMES (NEW OR MODERNIZED) ARE NEEDED IMPERATIVELY FOR THE AMERICAN "ARMY OF DEFENSE WORKERS."

PREPARES!

tory that builds the plane. And, before the machine-tools can be turned out, *homes* must be built to house the men that make the tools that make the planes! Provision by private individuals of adequate housing for defense workers is essential to the success of the National Defense Program.

In considering the housing of defense workers, we can learn many valuable lessons from the last war. At that time the Government undertook the entire job and found it necessary to build hundreds of thousands of temporary homes for defense workers. Much of this housing was abandoned after the war—making a vast proportion of this investment an ultimate waste to our taxpayers! If our citizens had built the larger part of these homes as "homes for *defense and the future*" most of this waste could have been avoided!

It is the purpose of this Defense Edition to explain to you how you can best build or modernize your home under today's conditions. Uncle Sam is doing more than ever to help you. Invest your money in a share of America and know the happiness and security of a *home of your own.*

A STATEMENT BY GOVERNMENT HOUSING AGENCIES

EDITOR'S NOTE: On the following pages, the Administrators of the various agencies of our government which are concerned with the problem of housing present their descriptions of the jobs they are doing to help you build your home economically, efficiently, and in accord with the national defense program of the United States.

DIVISION OF DEFENSE HOUSING COORDINATION

TODAY we build for defense. In the grave emergency with which we are confronted—we, the American people—all our energies must be devoted to preparing ourselves for resistance to threats against our democratic way of living.

To make ourselves secure it is necessary for us to have a well-trained well-equipped army, an invincible navy. To accomplish these things industry must operate at the top pitch of its efficiency. *Nothing* must be allowed to impair that efficiency.

The experience of the last world war showed us all too clearly that homes for defense workers must be provided to keep industrial wheels turning at top speed. It is our job, the job of the Division of Defense Housing Coordination, to see to it that the defense effort shall not be impeded by lack of housing for defense workers, and no American worker shall be forced to live in substandard conditions while carrying on duties vital to our defense.

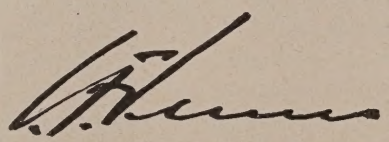
The good health and morale of the entire population are basically necessary for national strength and unity.

The Division does not build. It serves to centralize, unify, and direct the activities of existing Government housing agencies in so far as they are related to the defense housing task. The Division has power only to suggest and advise private industry. This, however, will do.

The number of new homes for defense workers and families of enlisted men for which Government funds have been allocated has reached approximately 112,000. This figure is equivalent to the total number of houses in the following cities combined: Salem, Massachusetts; Pasadena, California; Mobile, Alabama; Charlotte, North Carolina; Reno, Nevada; Joliet, Illinois; Canton, Ohio; and Little Rock, Arkansas.

Public building is, of course, only a part of the job. Private industry must supply the bulk of the housing needs.

To this end, Donald M. Nelson, Director of Priorities, Division of OPM and I, as Coordinator, have evolved and put into operation a system of priorities which will assure a steady flow of building materials to the spots and for the purposes for which they are urgently needed. Private industry will thus be enabled to do its part.



C. F. PALMER,
Coordinator of Defense Housing.

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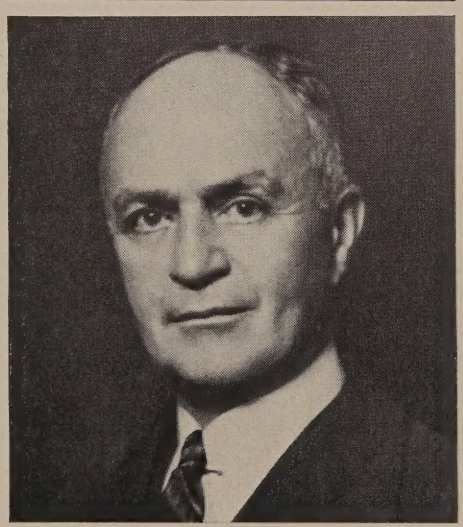
FEDERAL HOUSING ADMINISTRATION



THE nation's defense effort must have first call on our efforts and our resources—on our time, materials, and man power. Anything that interferes with the rapid production of weapons of defense must be set aside. Each of us has a part in this all-important effort to arm and defend our way of life.

Only with the entire national team—industry, labor, government—all in completely harmonious play will the defense of America be successful. And in no section of the defense field is harmony and team work more important than in housing.

Very early in 1940 it was recognized that speed and economy in providing shelter for workers in defense industries were vital to the successful production of guns, tanks, ships, and the thousand and one products and materials that go into their production.

Fortunately, great strides have already been made in providing housing for defense workers. Construction has been started on 261,000 new homes financed under the FHA Plan since July 1, 1940. Over 85 per cent of these homes were in areas affected by defense activities. This means that since mid-1940 an average of 650 new homes have been started under FHA inspection each working day in defense production areas.

New homes are being built under four different phases of the FHA program—the regular insured mortgage system, the so-called Class 3 financing for small homes, special defense housing under the new Title VI legislation, and the large-scale rental housing program. These four phases of the FHA program are being applied with the greatest possible vigor to provide housing facilities for the men and women who are forging the implements of national defense.

Still another part of the FHA program offers the possibility of large accomplishments in creating needed defense housing. For some years FHA has set the terms for a type of private financing which encourages repairs and remodeling. These are popularly known as "Title I" loans. This type of financing has great possibilities for creating additional defense housing through the remodeling and rehabilitating of old houses which can be found in all parts of the country.

On June 28 an Act of Congress was signed by the President permitting the FHA to insure loans ranging from $2,500 to $5,000 for this express purpose. This law also permits such loans to be extended for a maximum five-year term and to be repaid monthly. On September 1, when Federal Reserve Board Regulations on consumer credit went into effect, this type of loan under certain conditions was made an exception. On September 15, as an inducement to borrowers, the FHA reduced the maximum charge for such loans to a $4 discount per $100 from the $5 rate permitted up to that time.

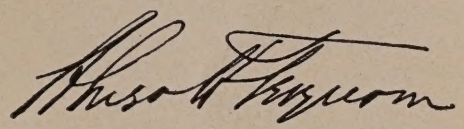
The question of construction materials that may be on the critical defense list affects all housing, both private and public. The possibility of material shortages has had much thought and careful watching for some time. A shortage of transportation facilities is also possible. On each of these problems we must feel our way as we go. Only the degree of our defense and the duration of the emergency will determine the full extent of the need for sacrifice of civilian for military uses.

The Supply Priorities and Allocation Board has established a procedure whereby a priorities rating is given to materials going into private residential construction. To expedite handling, FHA field offices are being utilized for this purpose by the Government, through the OPM. To assure the smooth continuation of construction already under way, the highest rating is being given projects under construction as of September 1, 1941, and to remodeling and rehabilitation. Such priorities apply to privately built projects located within reasonable commuting distance from the places of defense employment in Defense Housing Critical Areas.

These housing facilities must be intended primarily, suitable for, and available to workers engaged in, or to be engaged in, defense activities within the area. The projects include the customary equipment and appurtenances and may include stores and other facilities necessary to community life. The sales price or rental must be within reach of the defense workers (not over $6,000 per family unit if for sale, or a monthly rental of not more than $50).

These things, in brief, outline what is being done on the defense "home front." I believe that much still remains to be done. The country certainly has the skill, resources and experience to cope with the present housing emergency.

The first selfish interest of each of us is the preservation of democracy. Democracy—now—is ours. We will continue to build America according to the pattern that has served us so well in the past.



Abner H. Ferguson
Administrator

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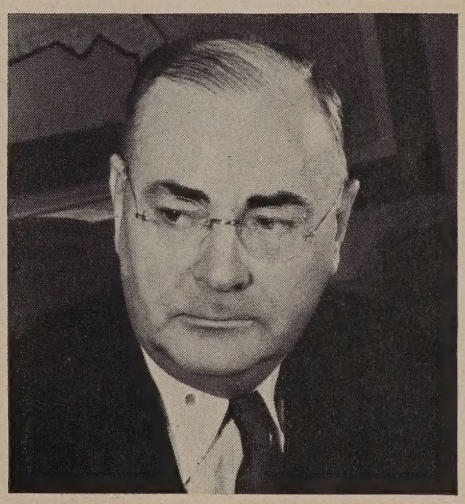
FEDERAL WORKS ADMINISTRATOR



THE time is at hand when all work is defense work and all housing is defense housing.

We are not at war, but if the United States is to be an arsenal for the democracies and the defender of the faith, nothing less than an all-out effort can win, and any shortage of living facilities required to keep the defenders of the nation alert and strong tends to weaken that effort.

Although the military training camp and the huge industrial plant are the most spectacular manifestations of the defense effort, more and more adequate diet, clothing and housing are being recognized as the foundation upon which the superstructure of defense must rest. Adequate defense housing, therefore, becomes the function of the national government equally with production of munitions of war, price control and priority of supplies. The specific need for housing in any area is determined by the Coordinator of Defense Housing who reports this need to the President for approval. It is on the basis of this approval that the President instructs the Federal Works Agency to undertake construction.

The Federal Works Agency's job in defense housing is concerned primarily with the housing of the families of industrial workers in defense industries and the families of non-commissioned officers of the Army and the Navy. We are concerned, therefore, not only with national defense but with a fundamental national institution — the family — homes. Defense housing means more than building dwelling units. It means building for family life, which is the keystone of the American way of life and the wellspring of strong national morale.

The job of providing the basis for decent, healthy, comfortable living is fundamental in the creation of happy home life from which come loyal and efficient workers. If our government expects defense workers to remain where they are most needed to produce for national defense and if it hopes to prevent a high rate of labor turnover, a decent, safe and sanitary place in which to live is very little for the worker to ask in return.

It is for this reason, obviously, that the Congress has appropriated funds and created authorities to supply this essential need. The steps taken thus far in the defense housing program have not been drastic. On the contrary, the Congress has tended not only to encourage private enterprise in the building of homes for defense workers, but has made provision for insuring the private investor in housing up to 90 percent of his risk.

In setting up the defense housing program, the Congress went still further in the protection of private enterprise. It provided that the Government should build only after private industry was either unable to fill the need for homes or, for one reason or another, was unwilling to take the capital risk involved. The Government, therefore, is in the defense housing business only and solely because of the failure of pri-

vate enterprise to provide enough decent homes in the areas where they are urgently needed.

The Congress also, and very wisely, set a limit on cost of these homes. This limit, although conservative, is not unreasonable, if we attend to our business of planning carefully and of seeing that land prices and labor and material costs do not get out of hand. Until the law was revised last April, the average shelter cost limit was set at $3,000. It is $3,000 now, except where masonry construction is used. In that case the limit may not exceed $3,500.

Thus far we have succeeded in constructing attractive homes without exceeding the average limit. To achieve this we have been compelled to develop group housing because of the very considerable increase in cost for utilities and also for other items when all-single houses are built. To make these homes attractive and, more important still to those who live in them, livable in practical ways, we have utilized the services of experienced architects, and we have developed site plans according to the latest experience and knowledge of specialists in that field.

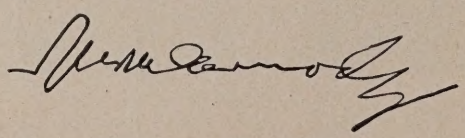
Although we are building these defense homes to meet emergency needs of the present, we are not unmindful of their possible impact upon community plans for the future. In many localities where defense production is now in full swing, there undoubtedly will be a substantial decrease in labor requirements in the post-defense period. To prevent so far as possible, the growth of ghost towns and a surplus of vacancies that would depress real estate values, we are building demountable structures which can be removed when they are no longer needed and set up elsewhere to again serve some useful purpose. In contrast to this, the Mutual Home Ownership Defense Housing Division of the Federal Works Agency is building communities of permanent homes for occupancy by defense workers who are likely to retain employment in the localities concerned after the emergency is past.

No individual or group of individuals, and no agency, either public or private, has ever undertaken to build so many homes for so low an average cost in so short a time simultaneously in more than 200 separate communities in the United States. That in itself would make the FWA defense housing program unique. More important, perhaps, in setting it apart from all other comparable programs is the underlying purpose and the spirit in which that purpose is being achieved.

The program itself grows out of a need for common unity in the defense of our country. We are not just erecting some more buildings; we are not doing just another construction job. We are in a very real sense contributing to the defense of the nation. We cannot afford to do less than a first-class job.

Unless the spirit of this enterprise permeates every division of government having to do with this defense housing program, as well as every single department of contractors' organizations, the job will not be well done.

The Congress, the President, and the general public expect us to build good houses, of sound materials, in the shortest possible time, and wholly and completely without irregularities of any kind anywhere, and without waste and without superfluous administration. They have a right to expect this. The men and women and children who while living in these houses and paying rent for them will themselves be making a definite contribution to the defense of our nation. Those who share responsibility for the defense housing program can do no less.



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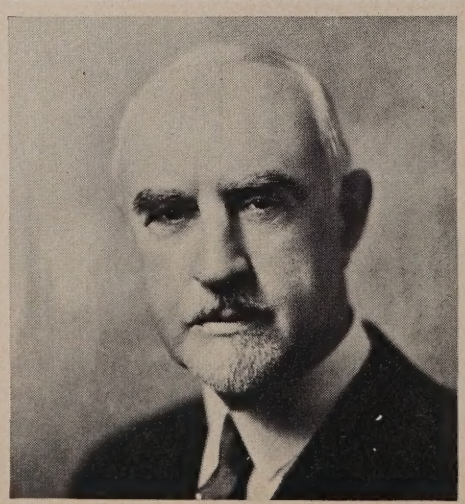
FEDERAL HOME LOAN BANK BOARD



WITH private home-financing agencies called upon for production of at least three new housing units for each one supplied through Government funds, the Federal Home Loan Bank Board has sought to encourage and speed home-building for workers in every defense area in the United States. Equal efforts have been extended to stimulate rehabilitation and modernization of existing structures to help overcome the acute shortages in crowded industrial centers.

The nearly 3,900 member institutions of the Federal Home Loan Bank System, with their assets of more than $5,000,000,000 supplemented by the huge credit resources of the System, already have produced thousands of homes during the period of emergency. For many years the largest single source of home-financing funds, these institutions—mostly savings and loan associations and similar local agencies—loaned more than $550,000,000 for home financing purposes in the first six months of 1941, an increase of 20% over the first half of 1940.

The funds used by these thrift and home-financing institutions come from the savings of families of small and moderate means. At least 54,000 new housing units were supplied through these sources in defense areas in the first half of 1941 and a yearly total of 120,000 is forecast.

The program for repair and modernization of existing houses has been carried forward through these same institutions, which are in a position to provide loans in every county in the United States. At the same time, the Home Owners' Loan Corporation, another agency under the Bank Board, has been cooperating with the office of the Defense Housing Coordinator in an effective way. An appropriation of $100,000 from the President's emergency funds has been utilized to provide the aid of architects and technicians in advising home owners who are willing to recondition their properties to give homes to defense workers.

These home owners may apply for assistance to the local Home Registration Offices under the Defense Housing Coordinator or to HOLC offices. Advice and cost estimates on

the utilization of vacant space for rooms and apartments—or for repair and modernization of entire homes—are provided without charge by HOLC staff technicians or experts employed under their direction through the President's funds. Property owners must, of course, pay for all improvements, with reimbursement coming from rent, but they will be advised on how to obtain financing and if they wish technical assistance in planning and supervising reconditioning projects, it will be provided at reasonable fees.

The HOLC has directed the reconditioning of more than 550,000 homes in the past few years, so is operating in a field in which it has had vast experience. That experience is being utilized in a still more ambitious direction through its Neighborhood Conservation and Rehabilitation Section. This section three years ago began a test program in the Waverly district of Baltimore, on the theory that essentially sound residential neighborhoods threatened by blight could be protected and rejuvenated by community vigilance and cooperation. Its program, concerned with one and two-family homes in Waverly, later embraced a survey of multiple-unit structures in a test area on Chicago. And in the past few months, it has directed its attention to study of wholesale rehabilitation and reconstruction of existing housing to speedily and economically supply living quarters for workers in defense areas.

Preliminary studies have been made in Norfolk, Va., and in Washington itself, which indicate that old, out-moded structures can be transformed into acceptable and permanent housing units at 50% to 60% of the cost of new construction, with a tremendous saving in time and materials. These studies have aroused great interest among defense housing officials and hold promise of large-scale developments soon.

Officials of the Bank Board and its agencies have cooperated from the first with the Defense Housing Coordinator and all Government departments concerned with providing homes for defense workers. The Board and the 12 Regional Banks of the Bank System have acted as liaison agents between the Government and the private home-financing industry—of which the 3,900 member institutions of the Bank System represent the largest single segment. Because every unit supplied by private funds releases Government funds for other defense purposes, the Board has sought to spur the private institutions it supervises to furnish all the housing that can be safely financed by private funds—either through new construction or conversion of existing structures. The program will be carried forward as long as the emergency lasts.

John H. Fahey

★ ★ ★ ★ ★ ★

FARM SECURITY ADMINISTRATION

THE Farm Security Administration, because of its seven years of experience in building low cost farm homes and shelters for migratory workers, has been assigned the task of providing temporary shelter to house defense workers in areas of acute need.

When it became apparent that defense workers were unable to obtain decent living quarters at prices they could afford to pay, Congress appropriated a total of $20,000,000 to alleviate this condition. The shelters being provided by Farm Security consist of trailers and demountable houses for families and demountable dormitories for single men and women. The Division of Defense Housing Coordination determines the need for shelters and then requests Farm Security to provide the number and type needed.

Farm Security by late August had either completed or projected temporary living quarters at twenty-three sites in fifteen States for approximately 6,000 single persons and 4,000 families. The locations are scattered — from Aberdeen, Maryland to San Diego on the West Coast. Trailers with underground services and utility buildings included average approximately $1,169 each. Farm Security has bought a total of 3,560 of these "homes on wheels." Trailers including light, water and facilities for bathing and laundry are rented to the defense workers for from $6.00 to $8.00 a month.

Demountable houses on the stopgap program are prefabricated two-room type, furnished and provided with utilities at an over-all cost of $1,855. Rentals on these houses approximate those charged for trailers. Dormitories for men and women are one-story buildings of panel construction in "H" and "T" designs. They cost about $420 a unit furnished and with the usual utilities. They accommodate from 50 to 60 workers. Single rooms rent from $3.50 to $5.00 a month while double rooms rent from $4.50 to $7.00 a month.

Under provisions of the Lanham Act, Farm Security is also engaged in a permanent housing program for defense workers in five localities. The largest program consists of a thousand homes addition to Greenbelt, Maryland. One interesting development in this program is the construction of seventy-one scattered rural homes for powder company employees at Radford, Virginia. When these homes are no longer needed for defense workers they will be sold to farm owners in the area who need better housing.

Farm Security is also, through State Corporations, financing the lease or purchase of tracts of land and are constructing prefabricated shelters to relocate some of the 14,000 farm families displaced from farms as the result of the land acquisition program by defense industries and the Army.

C. B. Baldwin

Farm Service Administrator

PRIORITIES . . . AND HOW THEY ARE OBTAINED

IN order to make sure that Americans working for national defense have decent places to live near where they work, and to help them establish for themselves the security of a home the Office of Production Management and the Defense Housing Coordinator have assured priority aid for the first 200,000 privately financed homes, in addition to making arrangements for priorities on 100,000 publicly financed units. The proper housing of defense workers is as important as the production of steel, machine tools, tanks, planes and guns.

Priorities guarantee that the essential materials, materials on which there are marked shortages within this country, will be made available for these homes before they are made available for non-essential, non-defense purposes.

To expedite the building of these essential homes for defense workers of all classes, project preference ratings are being granted. All of these defense housing ratings are in the "A" class—which means that they are considered urgently needed to strengthen our national defense.

With the impact of the defense program upon the national economy, housing operations in every field have been affected by the shortages in the products manufactured from critical metals. Yet plants manufacturing tanks, guns, shells, and other essentials of national defense, cannot be operated, and ships cannot be built without workers, and *workers must have places* to live! The production of housing has been in competition with the production of other defense materials, and was delayed because the scarce materials needed for both were diverted by priorities from housing into other uses. Because of this, a decision had to be made to regulate the flow of critical materials to insure the necessary supply for housing. This order on priorities for 300,000 houses became effective September 22, 1941.

What the Critical List Covers

Note: This list is based upon the critical position of the materials involved as of the date this list was issued, and since that position may change at any time, this list is subject to revision wherever circumstances warrant. The list includes items for which priorities assistance will be given.

Defense Housing Critical List

Any materials under priority control not listed herein, and which may be deemed essential in a particular project by those constructing it, shall be handled as an independent item for priority consideration, and will be considered on its merits in relation to that project.

A preference rating granted under a priority order issued to a builder may be extended to the applicant's suppliers, and re-extended to their suppliers in the manner specified in the priority order.

STEEL AND IRON—*to include only:*

1. Reinforcing steel, including rods, mesh, fabric, tie wire and accessories, for concrete and masonry construction.
2. Structural members—*to include only:*
   a. Bearing plates, under 6 pounds.
   b. Joist hangers — multi-family dwellings only.
   c. Anchors, bolts, tie rods, dowels, cleats, and timber connectors.
   d. Angle lintles—over openings in veneer masonry walls only—walls constructed of masonry veneer over wood framing.
3. Steel stairs, rails, etc.—only for multi-family dwellings where necessary for fire hazard protection — concrete preferred. Uncoated ferrous metal. Eligible for priority aid only if their absence would violate an applicable code or regulation pertaining to fire hazards.
4. Insect screen mesh—*made only of:*
   a. Painted steel.
   b. Thin coat galvanizing and lacquered.
5. Fire doors and their frames for multi-family dwellings only—wood cored with terneplate covers.
6. Roofing devices, flashings, half-round gutters, hangers and downspouts—*to include only:*
   a. Steel not heavier than 26 gauge, uncoated or phosphated treated and painted, or zinc coated by electrical process and phosphate treated and painted, or 2 lb. lead.
   b. Gravel stops, as for item "a" or asphalt dipped steel.
   c. Roof ventilators (aspirator type) as for item "a."
   d. Termite shields for infested areas only—continuous shields as for item "a."
   e. Wire basket strainers only for downspouts connected to sewer lines—zinc coated.
   f. Scuppers, and downspout connections for flat roofs—ferrous metal zinc coated.
7. Lath—*to include only:*
   a. Ferrous metal, paint dipped. Limited to fire-resisting partitions, ceilings and soffits, and to wall tile bed base, and where gypsum lath and gypsum plaster is not permitted. Metal lath is not eligible for "fire-resisting" surfaces where non-metallic materials will meet the requirements of the applicable code or regulation.
   b. Corner reinforcing—ferrous metal, paint dipped. Limited to not more than 2½ inch lap on each surface of internal angles and on each surface where different kinds of plaster base abut each other. Corner beads for vertical corners only, paint dipped ferrous metal generally, zinc coated only where exposed to moisture or extreme conditions of humidity—that is, in bathrooms and kitchens.
   c. Exterior stucco base, woven or welded fabric, non-metallic coated; zinc coated before fabrication, optional in California coastal district only.
8. Builders and Cabinet Hardware—with parts of steel or iron only except necessary bushings and pin tumbler assemblies of brass or bronze and, optionally, latch bolts, dead bolts, and stop buttons in exterior lock assemblies of brass or bronze; knobs, push plates, drawer and other pulls of glass or other non-metallic material. Exposed steel parts for exterior use, Japanned or primed for painting, lacquered over phosphate coating or cadmium coated, and excluding finishes of zinc coating, nickel or chromium plating except as below noted.
   a. Nails, screws, bolts, nuts and washers ferrous metal generally uncoated; zinc coated, optional, for roof coverings, exterior sheet metal work and wall ties only.
   b. Wall ties zinc coated for masonry veneer over frame construction.
   c. Pulleys and sash balances.
      (1) Uncoated Japanned or primed for painting, ferrous metal.
      (2) Electroplated zinc on ferrous metal spiral and similar sash balances.
      (3) Weights, cast iron.
   d. Self-releasing fire exit-devices, as for builders hardware above.
   e. Wood venetian blind hardware and shade fixtures, ferrous metal, primed for paint or lacquered.

NOTE: Hardware used exteriorly under extreme exposure conditions—as in salt air, zinc coated in lieu of as above listed. The phrase "under extreme exposure conditions" is to be interpreted in each case by the field offices processing the application, provided that "extreme exposure conditions" shall not be deemed to exist in areas more than 50 miles distant from bodies of salt water on the Eastern and Western seaboard nor more than 100 miles inland from the Gulf of Mexico, nor more than 30 miles inland from any of the Great Lakes.

9. Glazing points, zinc.

ELECTRICAL—*to include only:*

NOTE: Roughing in material limited to the recommendations of the electrical supplies industry on file in the Priorities Section, Office of Production Management.

1. Underground materials.
2. Overhead materials.
3. Entrance (main) service switch and meter pan or receptacle.
4. Meter.
5. Circuit breaker type distribution panels.
6. Fuse type distribution panels including fuses.
7. Interior wiring method.
   a. For Non-fireproof construction:
      (1) Knob and tube, wire and fittings.
      (2) Wire, and non-metallic sheathed cable.
      (3) Flexible metallic conduit and armored cable, zinc coating limited in thickness to that of standard electroplate for this material.
   b. For fireproof construction:
      (1) Wire.
      (2) Rigid steel conduit, enameled.
      (3) Flexible metallic conduit or armored cable, coated as above noted.
8. Conduit fittings, outlet boxes and wiring devices—number limited. Conduit fittings and wiring devices are limited to the quantities found necessary by the applicant to provide for the eligible number of outlets to be installed for switches, lighting fixtures, and convenience outlets. The number of such outlets for each dwelling unit that is eligible for priority aid shall not exceed the sum total for the dwelling unit calculated as follows:
   a. Bathroom—two outlets.
   b. Kitchen—four outlets.
   c. Dining room or dining space—three outlets.
   d. Living room—four outlets.
   e. Each other habitable room—four outlets.
   f. Each hall—two outlets.

(Continued on page 212)

Application for Preference Rating

Application forms are available throughout the country at local FHA offices and at home financing institutions. In order that the reader may be familiar with the information required in this application form, we present a replica for your study. Apply for your forms at the local home financing institution where you expect to do business. Familiarize yourself with the answers to the questions shown in this form as they will apply to your project, whether it be a new home or the modernization of an old one.

We suggest that you again review carefully the products offered by the manufacturer-advertisers through this Defense Housing edition of SMALL HOMES GUIDE. These products have been particularly selected because of the good values they offer to the homebuilder and furthermore because these manufacturers understand and can use the same Class "A" priority ratings to obtain new supplies of raw materials awarded to this type of home.

In addition to the information required in this certificate (which must be signed by you as owner) you must supply one set of plans (including working drawings and specifications) showing the design and the materials and equipment selected. Your project will be considered as qualified under defense housing if it is so approved after your application has been reviewed by the Federal Housing Administrator and if it complies with rules and regulations governing "Priorities and Standards for Defense Housing."

The application will be reviewed by the Defense Housing Coordinator and if approved by him will be submitted to the Priorities Division of the Office of Production Management with a recommendation that the project be assigned a project Preference Rating. Such rating shall be subject to extension in accordance with safeguards to be defined by the Priorities Division.

The Director of Priorities is making use of the facilities of the FHA as a ready means of immediate assistance. This special service of the FHA is completely divorced from and has no connection with its underwriting activities as a mortgage insurance agency. All applications for preference ratings will be processed without regard to the type of financing used.

P.D.–105 APPENDIX III

OFFICE OF PRODUCTION MANAGEMENT
DIVISION OF PRIORITIES
WASHINGTON, D. C.

No.....

Date.....

APPLICATION FOR PREFERENCE RATING
(Privately-Owned Defense Housing)

INSTRUCTIONS—Applicant must be the user of the material or equipment. Before filling this applicaton, the applicant should obtain and carefully consider the Outline of Procedure for Obtaining Preference Ratings for Defense Housing Construction issued by the Director of Priorities, Office of Production Management, Washington, D. C. The application must be executed in quintuplicate, original and three copies forwarded to the local office of the Federal Housing Administration. PLEASE USE TYPEWRITER.

The undersigned applicant hereby requests preference rating assistance on materials and equipment included in the Defense Housing Critical List to be used in connection with the construction or rehabilitation

of.....dwelling units to be located at.....
Street

City *County* *State*

Check Whether
New Construction ☐
Rehabilitation ☐

One set of drawings and specifications showing the design, materials, and equipment for each basic type of dwelling unit or property improvement is submitted herewith together with a plot or subdivision layout plan showing the location of each building.

Item No.	Name and Description of Material	Total Quantities
1.		
2.		
3.		
4.		
5.		
6.		

(*If additional space is needed a supplemental typewritten statement may be attached.*)

In support of this Application the undersigned hereby certifies that, insofar as items on the Defense Housing Critical List are concerned:

(1) all the materials and equipment listed above are necessary to the completion of the construction, and will be used solely in order to complete this project;

(2) no practical substitute or alternative source of supply is available;

(3) quantities are not greater than needed and delivery is actually required for the job not later than .....;

(4) the rehabilitation shall create or make habitable increased living accommodations.

Construction commenced, or will commence.....

Subscribed and sworn to before me

this.....day of.....19.....

Legal Name of Applicant

Notary Public

Address of Applicant

By.....
Signature and title of duly authorized official.

The undersigned, as owner of the property, hereby certifies that:

(1) the estimated present market price of the property (including land and proposed buildings) per dwelling unit is $.....;

(2) the estimated monthly shelter rental (excluding charge for services such as light, heat, etc.) per dwelling unit under present market conditions is $.....;

(Fill in No. (3) if for sale, or No. (4) if for rent. Do not fill out both.)

(3) he proposes to charge a sale price per dwelling unit of $.....;

(4) he proposes to charge a monthly shelter rental per dwelling unit of $.....;

(5) he understands that it is in the interest of national defense to provide dwelling accommodations for persons engaged in national defense activities and that if priorities aid is granted pursuant to this application, it will be upon the condition that the owner will make every reasonable effort to grant preference as to occupancy to such persons; and

(6) he agrees to report on rentals, sales prices and occupancy as may be required from time to time by the Director of Priorities.

Subscribed and sworn to before me

this.....day of.....19.....

Legal Name of Owner

Notary Public

Address of Owner

By.....
Signature and title of duly authorized official.

TO: DEFENSE HOUSING COORDINATOR

The above construction, subject to modification, if any, noted on the back hereof, (is) (is not) considered to be within the meaning of "defense housing," and to comply with the applicable requirements:

Federal Housing Administrator

Dated at

By.....
Authorized Agent

Recommended for priorities and subject to modifications, if any, noted on back hereof:

Dated.....
Defense Housing Coordinator

By.....

PRIORITIES . . .

(Continued from page 210)

g. Each exterior entrance—two outlets.
h. Utility room—three outlets.
i. Basement:
(1) In dwellings which do not contain a utility room—five outlets.
(2) In dwellings which contain a utility room in addition to a basement—three outlets.
j. Garage, one car—two outlets; two car—three outlets; multi-family—two outlets for each enclosed car stall.
k. Other areas—number as determined for the individual case by the office processing the application.
l. Special purpose outlets for ranges, refrigerators and for heating, ventilating, and plumbing appliances and equipment—number as determined for the individual case by the office processing the application.

NOTE: The following items each count as one outlet: switch box—combination switch and convenience outlet—duplex convenience outlet—outlet for permanently installed fixture—special purpose outlet.

9. Plates—switches and convenience outlets, non-metallic.
10. Lighting fixtures — except aluminum and solid brass or bronze, copper and brass plating permitted.
a. Indoor fixtures, light gauge spinnings, stampings and drawings; non-metallic (glass, plastics, porcelain, etc.) wherever practicable.
b. Outdoor fixtures and standards, cast and wrought ferrous metal only.
11. Electrical accessories.
a. Wiring, bells, buzzers, push buttons and transformers — multi-family dwellings only.
b. Lock releases — multi-family dwellings only.
c. Entrance door communication—multi-family dwellings only.
d. Public telephone systems.

PLUMBING:

Plumbing Installation Limitations for One- and Two-Family Dwelling Structures.

1. Each dwelling unit consisting of two bedrooms or less is eligible for the installation of not to exceed the following fixtures: one single or double laundry tray; one single or double compartment kitchen sink; one tub with or without shower fittings over tub, or fittings for a non-metallic shower stall; two water closets; and one lavatory.

2. Each dwelling unit consisting of three or more finished bedrooms or consisting of two bedrooms plus sufficient unfinished space to provide for one or more additional bedrooms is eligible for the fixtures specified in Item **1** above plus the roughing-in for one additional lavatory, water closet and tub or shower stall, provided such roughing-in is serviced by the same soil stack and water supply risers as are necessary for the initial bathroom installation.

3. In two story dwellings, eligible materials are limited to plumbing installations incident to not more than one soil stack per dwelling unit.

4. In one story dwellings where the room layout prevents the use of one soil stack per dwelling unit to service the fixtures in the kitchen, laundry and initial bath, eligible materials may include one additional 1½" waste and necessary vent and water supply piping for the kitchen or laundry fixtures.

PLUMBING AND GAS DISTRIBUTION SYSTEMS—*to include only:*

1. Cast or stamped ferrous metal, enameled and vitreous ware plumbing fixtures, the latter wherever practicable.
2. Fixture fittings and trimmings—base metal limited to ferrous metal, yellow brass and zinc die castings with plating of flashed copper and nickel or unplated.
3. Drainage and Venting Systems—*to include only:*
a. Cast iron pipe and fittings.
b. Galvanized steel pipe, wrought iron pipe and malleable fittings generally non-metallic coated. Priorities shall not be granted for metallic coated wrought iron piping or metallic coated malleable fittings, except where required by applicable code or regulation.
c. Ferrous metal and brass tubing traps, clean-outs and connections for fixtures (brass limited to minimum necessary).
4. Water Distribution Systems—*to include only:*
a. Galvanized steel or wrought iron pipe and malleable fittings, or cement lined ferrous pipe and fittings—lead wherever practicable, *inside buildings only.* This means wherever practicable in the opinion of the applicant provided the use of lead is not prohibited by applicable code or regulation.
b. Valves—iron and brass (brass limited to minimum necessary and used for seats only wherever practicable).
5. Water Heaters (storage type) and Hot Water Tanks—*made only of:*
a. Galvanized sheet—only where local conditions necessitate — that is, wherever black steel water supply piping is not permitted under applicable code or regulation.
b. Black steel, painted.
c. Coated steel (enamel or glass lined).
d. Brass valves, connections and controls for water heaters.
e. Copper coils for storage type hot water generators and heat exchangers—multi-family systems only.

NOTE: Electric water heaters of the storage type may include immersion units and other necessary parts.

6. Water Softeners for multi-family dwellings only, to have painted steel exteriors, interiors as for water heaters, etc.
7. Gas Distribution System—*only for items noted below:*
a. Black steel pipe and fittings.
b. Valves as for water distribution systems.

HEATING AND VENTILATING EQUIPMENT —*to include only:*

1. Boilers and Furnaces—*only for items noted below:*
a. Boilers—ferrous metal with brass safety devices and cocks, limited to minimum practicable.
b. Furnaces—ferrous metal with zinc coated casings, interliners and baffles for gravity furnaces and with zinc coated interliners where used in forced warm air furnaces.
c. Breechings—ferrous metal non-metallic coated or uncoated.
d. Floor furnaces, space heaters, stoves and other similar heating devices, wherever practicable and where they may replace the above. However, it shall not be deemed practicable to use the above types of "overflow" heaters where such heaters are not acceptable under applicable code or regulation.
e. Vents for heating equipment in demountable houses — ferrous metal, non-metallic coated. Vents may include necessary casings, supports and connections. The phrase "demountable houses" may include all prefabricated structural enclosures for dwelling purposes.
2. Accessories—*consisting only of:*
a. Pumps.
(1) Water Circulators.
(2) Condensation.
(3) Vacuum R.L.
b. Fans, Blowers and Motors—Centrifugal—forced warm air systems only. Propeller — large exhaust on large multi-family units.
c. Oil Storage Tanks, ferrous metal—non-metallic coated, size limited to minimum necessary, for example, not to exceed 275 gallons capacity for plants serving less than five families.
d. Expansion tanks for hot water systems — ferrous metal, non-metallic coated.
3. Distribution Materials—*consisting only of:*
a. Piping—ferrous metal, uncoated.
b. Fittings—cast ferrous metal, uncoated.
c. Valves:
(1) Vent — ferrous metal wherever practicable, yellow brass elsewhere, no plating.
(2) Gate — ferrous metal wherever practicable, yellow brass elsewhere, no plating.
(3) Globe — ferrous metal wherever practicable, yellow brass elsewhere, no plating.
(4) Cocks — ferrous metal wherever practicable, yellow brass elsewhere, no plating.
d. Traps—central steam systems for multi-family dwellings only.
(1) Boiler return.
(2) Blast.
(3) Bucket.
(4). Float and thermostatic.
e. Ducts and connections.
(1) Ferrous metal phosphate treated and painted or untreated.
(2) Bright tin.
f. Hangers and brackets.
(1) Strap iron.
(2) Cast iron.
4. Radiators, Convectors and Registers—*only for items noted below:*
a. Radiators and convectors of cast iron, without metal enclosure.
b. Valves.
(1) Radiator, yellow brass unplated.
(2) Air Valves, yellow brass unplated.
c. Traps — Radiator, for multi-family dwellings only, yellow brass unplated.

(Continued on page 214)

Prominent among the men attending the New York Sales Executives Club luncheon given for Donald M. Nelson, Executive Director of the Supply Priorities and Allocation Board, and Director of Priorities, were leaders in the homebuilding industry. Mr. Nelson's splendid presentation of our national defense problem and the methods by which OPM does the job of putting first things first, further enlisted the cooperation of this industry toward the accomplishment of our national defense program.

WHAT'S YOUR PROBLEM?

Following are a few of the more important types of questions which readers are asking us daily. This is the reason we have devoted a good proportion of the contents of this issue to the rulings of the government under the present national emergency. Careful study of the questions and answers below may enable you to answer your own questions.

Q. Hartford, Conn. We have recently inherited a large old-fashioned house with 18 rooms. It is much larger than we need for ourselves so we would like to remodel it so that we can rent out three apartments and keep one for ourselves. We have no cash. Is there any source from which we can get help?

A. The FHA Repair for Defense Program is encouraging just this type of remodeling of old houses into multi-family dwellings. You do not have to have any cash saved up to remodel regardless of the amount of the mortgage on the house (if there is a mortgage). If you need technical assistance you may apply to the Home Owners' Loan Corporation. We urge you to go ahead at once as you will accomplish three objectives: (1) get your own property in repair; (2) secure an income which will pay off the indebtedness (FHA Title 1 provides for a maximum of $5,000 with a maximum of 5 years in which to repay the loan); (3) you will be aiding our National Defense Program by providing extra living quarters since you are in a defense area.

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Q. Syracuse, N. Y. We have just moved into this city. Where can we get plans for a five room house which we can build for about $6,000 and have the benefit of the announced priority aid?

A. You will find a number of tested and economical plans right in this book. See pages 219 through 231. These plans have been translated into homes by expert builders, and they know that they can be built under the housing priorities regulations in defense areas. In addition, architects in your locality may have or will draw plans for an economical, attractive home; your local lumber dealer, too, has a wide selection of proven plans from which you can choose the home you like and can afford.

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Q. Pittsburgh, Pa. Can we build part of the house now and later add a wing for an extra bedroom and bath? Will we be able to get the money from FHA for this wing although the original mortgage is not amortized by that time?

A. The FHA has no money to lend. Your ability to get the money depends on your local FHA-approved mortgagees. FHA insurance on the loan is possible provided all other FHA requirements, are met. The part of the house you propose to build originally must constitute a complete living unit and must be suitable and acceptable to the typical occupants in the area. Caution should be used to get a commitment before the beginning of construction since your curtailed plan might not be acceptable for insurance. If the original construction is acceptable for FHA insurance and is insured, it is possible to make a new insured loan based on the unpaid portion of the original mortgage and any future additions you propose making to the house.

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Q. Scarsdale, N. Y. My architect has just completed plans for our new residence which he estimates will cost $25,000. Are we safe in proceeding with construction under present conditions?

A. Since your specifications undoubtedly include aluminum windows, brass pipe, copper tubing, copper exterior metal work, screens, etc., which are not available to home builders because of their scarcity, we recommend that you postpone building this home until after the emergency. Furthermore, you are not in a defense area and cannot get priorities on any materials for this price home.

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Q. Newark, N. J. My builder has supplied me with copper pipes for my water lines. Since I have a priority rating for my house, he wants to extend my priority to the plumbing supply house to replace the copper pipe he has sold me. Can this be done?

A. In no case! He cannot get copper under any circumstances by use of the priority rating; and if he attempts to get the kind of piping permitted under the priorities' list by use of your rating, he or you or both of you may be subject to prosecution. The purpose of the priorities' rating is to conserve the scarce metals which are desperately needed for America's armament program. The builder who supplies you with one of these critical metals must suffer the consequences of not being able to replenish his supply.

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Q. Boston, Mass. Our home has been under construction for about a month. The FHA approved loan is for $4,800. During the past month costs have risen so that we realize that we cannot complete the house on the mortgage money. Will FHA give us any help in this situation. We put all of our savings into the down payment and have nothing left.

A. The contractor has evidently purchased his supplies and will proceed with the construction. The FHA does not recognize temporary increases in prices in consideration of long term financing.

Q. Cleveland, O. Our proposed home runs approximately $2,000 over the limit of $6,000 set for defense homes due to the unusually high labor costs in this city. Can we get priorities assistance on several items of material and equipment which our contractor tells us we cannot buy unless we get an A rating?

A. FHA assistance in getting a preference rating is not available on houses with a market in excess of $6,000 or a shelter rental in excess of $50. Information on preference ratings on houses in excess of these amounts should be addressed to Office of Production Management, Priorities Division. Very little encouragement is available at this time.

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Q. LaCrosse, Wis. Our home has been approved by FHA for a loan of $5,400. The specifications call for copper pipes and copper flashings, steel girder through the length of the house, metal lath, and a number of other items which are now forbidden under the critical list of materials. Will FHA cut the value of our house if we take out these metals and substitute those which are permitted by the priorities rulings?

A. Yes. It is very likely that the acceptability of the finished house to the market will be less.

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Q. Montgomery, Ala. We are anxious to build a home at today's prices but understand that FHA appraisals are not in line with rising costs. How much money do we need for a down payment?

A. Regardless of price the borrower under FHA insurance financing must have enough cash so that when added to maximum amount of insurable loan, it will be enough to completely finance the transaction, but in no event must the cash investment be less than 10 per cent of the FHA value estimate. Temporary price increases are not recognized in FHA appraisals for long-term mortgages.

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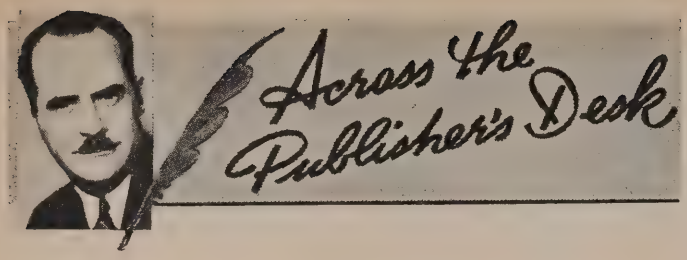
Q. San Francisco, Calif. The local FHA approved lending institution has turned down making us a loan on our house. We understand that the fee we paid would be refunded in case we were not permitted to go ahead. Will you please advise us.

A. If rejection occurs in FHA Preliminary Examination the examination fee is returned to the lending institution. If rejection occurs as result of part processing or full processing, no fee is returned.

(Continued on page 252)



THE change from a peace time economy to an "All Out for Defense" national policy will, in varying degrees, affect everyone of us. No one argues the principle that the more adequate our defense the less likely we as a nation will have anything to fear. Therefore, we all must work toward the objective of assured safety for *all* our homes.

You, as a reader, have manifested an interest in either building your own home or modernizing an old one. You obviously want to know the answer to the question, "Are the materials I need going to be available?" You have every right to know the answer. If there are not enough of some materials, particularly metals, to take care of our immense National Defense Program, described earlier (see pages 203, 204, 205), and at the same time satisfy everybody's civilian wants, then there must be some system controlled by our government to allocate these materials where they are *most* needed. Under such a system, of course, a lot of non-essential businesses will suffer. It is not priorities that hurt, but an actual shortage of materials. The priorities system is merely to put first things first as they relate to our national defense.

Our government has officially decreed that moderate cost homes under $6,000 are necessary in defense areas (approximately 75% of the United States). Modernizing of old homes in these same areas is likewise an aid to defense. Therefore, if you can qualify as outlined in this program, you are entitled to priorities aid for the materials you need in getting a new home of your own by the use of the form as pictured in this section. There are additional steps being taken to give priorities aid to modernizing in defense areas and even essential repairs in all areas. In this case the dealer makes out a simple form termed "Consumer Certificate for Purchase of Materials Needed for Remodeling or Rehabilitation in Defense Critical Areas," the total cost of which should be under $3,000. The form itself must be certified by the owner of the home. In the Division of Priorities of O P M, arrangements are now being made to supply both manufacturers and dealers with an allocation of materials which can be replaced later based on their particular conformity to defense housing needs.

Our suggestion is, therefore, to get in touch with your local lumber dealer for either repairs or building a new home. You will find his advice helpful as to what you can safely do under the present national emergency.

We are all proud to be Americans —and every true American should own a piece of America—his own home, for as we become more and more a nation of homeowners the more America is worth defending. We urge you, particularly if you are now enjoying better wages, to plan your own home. This industry can offer you a better home for your dollar than ever before in its history. If you can build now you will be providing for the security of your own family in the future. If the restrictions are such that you can not build now, then plan your home so you can start as soon as all of us, by working together, can relieve any trace of an emergency. In the meantime, invest all you can save in Defense Bonds as these will be the foundation on which you can own a piece of America—your own home.

2129 S Street, N. W.,
Washington, D. C.

PRIORITIES . . .

(Continued from page 212)

d. Registers and Grilles.
   (1) Stamped or cast ferrous metal.
   (2) Fabricated steel optional for large units in floor—that is, supply registers for pipeless or floor furnaces, and systems using a single return grille.

5. Firing Equipment—*only for items listed below:*
   a. Oil, gas and coal burners.

NOTE: Oil burners eliminated from eastern seaboard area.

6. Control Equipment — *only for items listed below:*
   a. Damper Regulators.
   b. Thermostats.
   c. Pressure Controls:
      (1) Pressure Reducing Valves — *multi-family only.*
      (2) Pressure stats.
      (3) Pressure Relief Valves.
   d. Relays.

NOTE: Above items to be reduced to minimum and plating eliminated.

HOUSEHOLD EQUIPMENT—*to include only:*

1. Ranges and Refrigerators (as available in the industry).
2. Incinerator hardware and fittings—ferrous metal, non-metallic coated, multi-family dwellings only. Incinerator proper, of non-metallic material only.
3. Refuse receptacles—metal cans, zinc coated, modified as per Federal specifications or phosphate treated and painted.

LAND DEVELOPMENT ITEMS—*only as noted below:*

1. Wells—Reinforcing Mesh for dug well slabs only.
2. Wells Casings — ferrous metal, zinc coated only where local conditions make necessary.
3. Pipe Lines and Connections for water and gas distribution systems, as below:
   a. Pipe and Fittings, ferrous metal; zinc coated pipe only in smaller sizes or where local conditions require. The term "smaller sizes" means pipe sizes of three inches and less and fittings for such pipes.
   b. Fire Hydrants—ferrous metal with brass limited to minimum necessary for working parts.
   c. Valves and Stop Cocks—ferrous metal where possible, otherwise with brass working parts.
   d. Valve Boxes, small—cast ferrous metal.
4. Storage Reservoirs—*only for items listed below:*
   a. Reinforcing Steel.
   b. Elevated Steel Tanks and Supports.
5. Manholes—ferrous metal covers and frames and step bars—*for public right-of-way* only.
6. Water and Sewage Treatment Plants—*to include only:*
   a. Reinforcing Steel.
   b. Cast or other ferrous pipe.
   c. Valves and fittings.
   d. Septic tank fittings, ferrous metal non-metallic coated. Tanks, non-metallic only.
7. Drainage and Culverts—*to include only:*
   a. Reinforcing Mesh.
   b. Inlet Frames and Gratings—cast ferrous metal.
   c. Ferrous metal gaskets and bands where required for reinforced concrete drainage pipe.
   d. Ferrous metal angles for inlet throats in gutters.
8. Pumps—*to include only:*
   a. Shallow and Deep Well.
   b. Pressure Tank — phosphate treated ferrous metal painted, zinc coated where local conditions require it.
9. Electrical Service: extensions from distribution systems — overhead and underground materials of metal or with metallic components (except metal light standards).

PLANNING FOR DEFENSE AND THE FUTURE

WE are sure that in the foregoing pages we have taken most of the mystery out of Defense Housing by explaining its somewhat confusing complications. After all, once the prospective homebuilder understands the situation his course of procedure is not difficult. The basic fact still remains that in most sections of the country, particularly the Defense areas, the building of new homes and the modernizing of old ones is encouraged. Such projects can still be undertaken with the same future advantages and under practically the same methods of procedure which have always been the primary editorial themes of SMALL HOMES YEAR BOOK in its past issues. The vital difference is that homes built or modernized in the next year will have a double significance for the welfare of our country and its people during these days of Defense activities! In most instances such investments will help to meet housing requirements for Defense Workers. In so doing the owner discharges his patriotic duties as far as the current situation may be involved. In addition he is insuring the *future* of his own family!

Therefore, from this point on, this Defense Edition will follow its time-proven editorial formula—from Financing to Furnishing. Following is a brief preview of each ensuing editorial division. These actually represent the five steps necessary to achieve a new or modernized home which will serve both for "Defense *and the Future!*"

* * *

We can assume that the reader already owns a building site or the house which he proposes to modernize. If not, advice on this subject will be found beginning on Page 218. This preliminary step having been achieved, let us give you a preview of the five major sections of this book which represent the five steps necessary toward the achievement of that desirable goal—home ownership!

DESIGN (Page 219). Here you will find 42 recommended small house plans. Complete working drawings and specifications may be obtained at low cost from local lumber dealers or organizations whose addresses are given. An examination of these plans will guide you in working out your own plans or, in many cases, you will find almost exactly the house you want, at least with minor changes which will be made for you by your local lumber

dealer or contractor. The "engineered" homes are particularly recommended to your attention, because they involve additional helpful services rendered by the specified manufacturers.

FINANCING (Page 233). In this section is presented not only thoroughly practical and helpful editorial advice but an explanation of the exact sources through which the reader may obtain long-term amortization financing both for new homes and the modernizing of old houses—a clear guide through the maze of Defense Housing complications. Anyone, *anywhere* (particularly in the Defense areas) will have no trouble in financing his project if the plans and specifications meet home financing requirements.

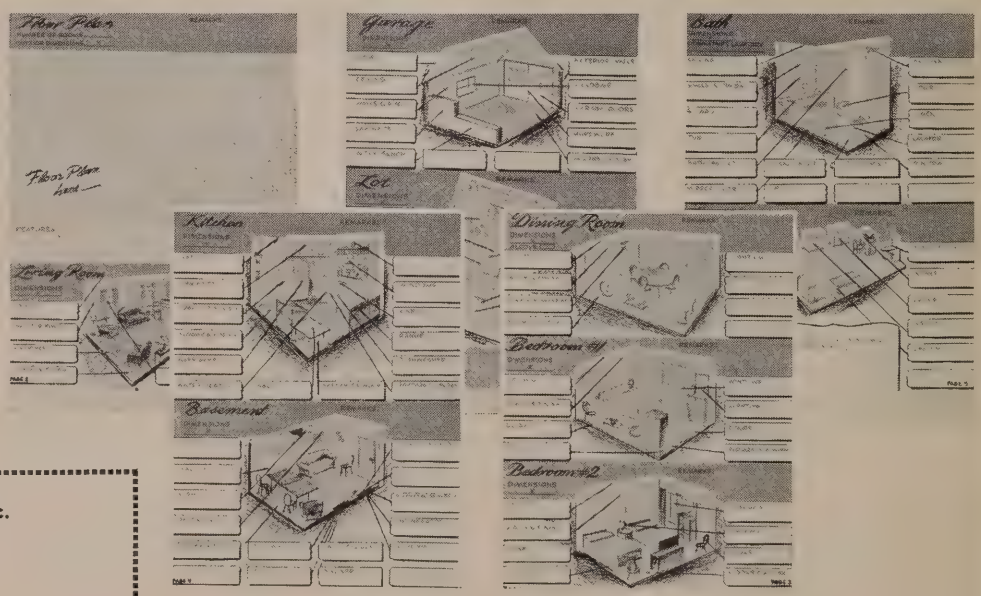
CONSTRUCTION (Page 239). In easily comprehended layman's language are presented full descriptions of the major divisions involved in the construction of your new or modernized home. The performance of building materials and methods, as proven by past experience, is more vital than ever before to those readers who are about to make their most important investment in a "home for Defense *and the Future!*"

EQUIPMENT (Page 261). Here you will find practical and easily understandable directions which will aid you in selecting the best of modern heating equipment for your new or modernized home. Recommendations are also given on the practical layout, decoration and equipment of modern kitchens and bathrooms.

FURNITURE AND DECORATION (Page 277). In this section the reader will find practical advice through which he (or more particularly *she*) can achieve correct decorative schemes for the new or modernized home. This information begins with methods of working out decorative schemes for each room in the house, including the major component parts of furniture and decoration. It offers a special service—the Plan-a-Room kit — available to readers, which includes templets for you to locate your own furniture and suggestions for the practical application of decorative materials. A leading expert gives you sound advice on the proper use of colors in establishing decorative backgrounds in paints and wallpaper.

We have now presented a brief preview of the five steps to the achievement of a home for "Defense *and the Future!*" To assist readers in the exact accomplishment of several of these important steps, we also wish to offer the services of the VISAGRAPH as described below. Obviously, the VISAGRAPH actually comprises a set of visual specifications which will materially help the reader to define his own requirements as he discusses his problems with the lumber dealer and the contractor. The VISAGRAPH, if carefully filled out, will make it much easier for you to establish a thorough understanding both for your own family and with your ultimate builder. Use the coupon below and get your copies immediately. You will find the VISAGRAPH of invaluable service in helping you to achieve the home of your dreams!

THE VISAGRAPH . . . to help you plan and modernize your Home



NATIONAL HOMEBUILDERS BUREAU, Inc.
572 Madison Avenue
New York, N. Y.

Enclosed you will find $..... Please send me ..... copies of the new VISAGRAPH at 10c a copy.

Name .....

Address .....

City ..... State .....

Above are illustrated the first five pages of the Visagraph. This is an eight-page booklet which makes it easy for you to specify the exact materials which you wish in your new home or the one you are modernizing. It gives many valuable suggestions while your plans are being developed and makes it easy to arrange contracts. Your complete copy provides space for visual specifications covering each room of the house you have selected and includes specific decisions covering specifications for the attic, insulation, window and door accessories, heating equipment, wiring, hardware, and general protection against termites and the elements. Send for your copies today. You will need at least two—one for your builder and one for your own files. The cost is surprisingly low—10c a copy.

HOW TO TAKE THE DOUBT OUT OF HOME BUILDING!

HERE's a new, easy guide to economical small home building. It's the modern Portfolio method of giving you the same information that architects use, in easy to understand form. It includes two sections of popular small home designs, and covers other subjects, as listed below. It is issued by the California Redwood Association to help you—no matter what type or what price home you plan to build, buy or remodel.

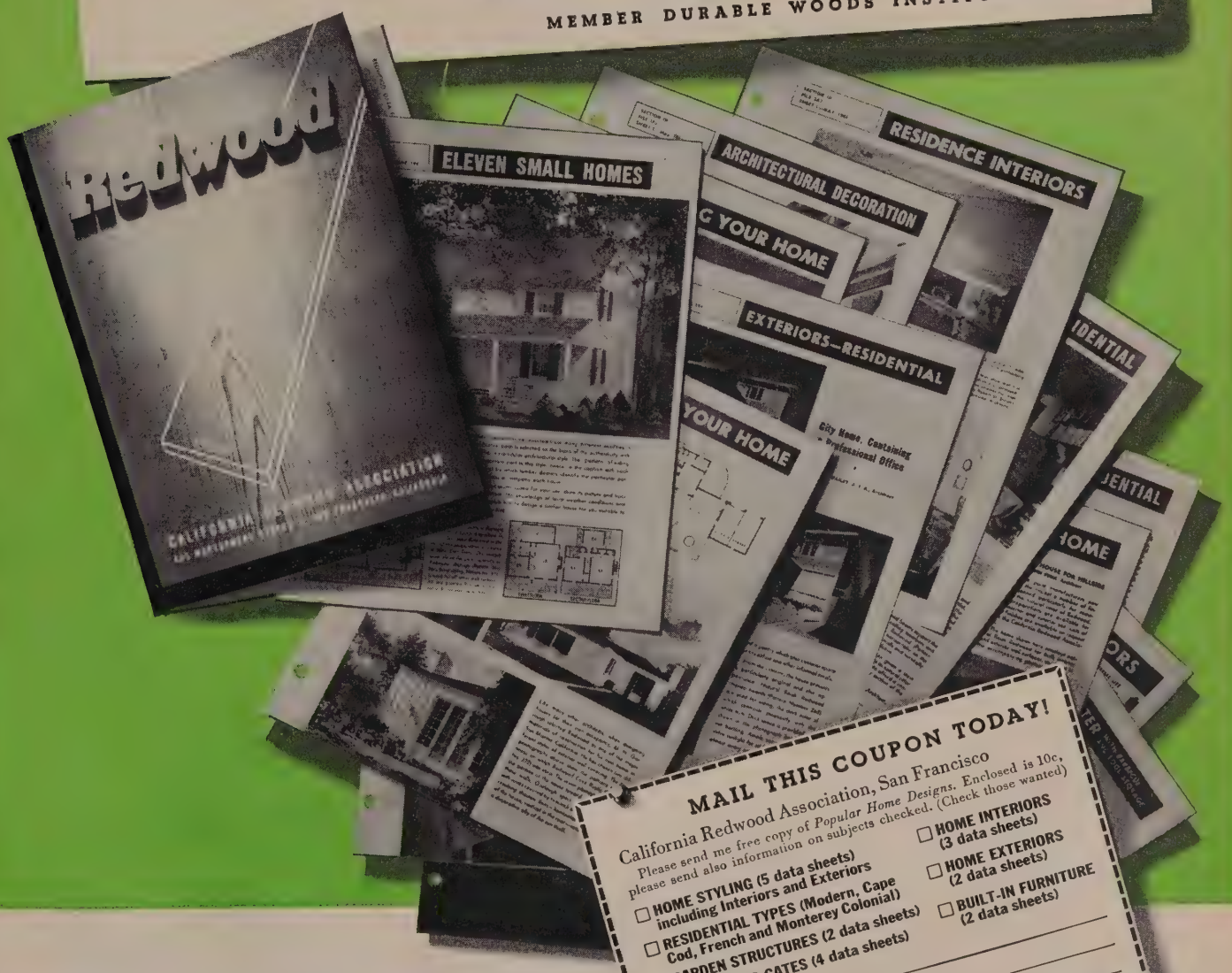
The Redwood Planning Portfolio explains the vital factors in sound building practice as followed by architects and reliable contractors. It simplifies planning, answers your questions on how to get the most for your money in beauty, architectural style, permanence, wear and weather resistance, and how to add other important values to your home, including higher resale value.

When you build of Redwood you can be proud of your home forever. For Redwood is unsurpassed in beauty, durability, economy and "stay-put" qualities for exteriors and interior uses.

Mail the coupon below for free copy of *Popular Home Designs*. Also send 10c for Portfolio Data Sheets as listed.

California Redwood Association

MEMBER DURABLE WOODS INSTITUTE



MAIL THIS COUPON TODAY!

California Redwood Association, San Francisco

Please send me free copy of *Popular Home Designs*. Enclosed is 10c, please send also information on subjects checked. (Check those wanted)

- ☐ HOME STYLING (5 data sheets) including Interiors and Exteriors
- ☐ RESIDENTIAL TYPES (Modern, Cape Cod, French and Monterey Colonial)
- ☐ GARDEN STRUCTURES (2 data sheets)
- ☐ FENCES AND GATES (4 data sheets)
- ☐ HOME INTERIORS (3 data sheets)
- ☐ HOME EXTERIORS (2 data sheets)
- ☐ BUILT-IN FURNITURE (2 data sheets)

Name_____

Address_____

City_____

Architects Choose Redwood for Their Own Homes!

Architects are authorities on building materials. With scores of materials to choose from, one out of four architects use Redwood in building their own homes, as proved by a recent survey. Last year 50,000 Redwood homes were built. This year the trend to Redwood is even more pronounced—for

REDWOOD'S THE MODE, TODAY AND TOMORROW

• • •

SELECTING YOUR HOMESITE

TODAY the problem of selecting a homesite is more complicated than it was for our forefathers. With an abundance of choice homesites from which to select (each one with the desired attributes) their task was comparatively simple. But today, even though we are crowded into large cities, we can still enjoy a full and complete life amid pleasant surroundings if we observe certain basic precautions.

Outside its business and industrial core each city has a ring of residential areas. The more desirable are usually on the side from which the prevailing winds blow, so that smoke and dust are avoided.

In a growing city no district is free from change. The retail center invariably tends to expand towards residential areas with the largest purchasing power. Rents drop in older districts as they become shabby, and new developments grow on the edge of existing districts when transportation lines are extended.

Proper zoning and the assistance rendered by the Land Planning Division of the Federal Housing Administration are of great assistance and furnish additional protection to the community developer who is endeavoring to create and stabilize property values. Permanent, desirable and attractive neighborhoods do not just happen; they must be planned.

The Federal Housing Administration determines the "life expectancy" of residential property by an analysis of the following factors:

1. The economic stability of the city of which it is a part.
2. Protection provided by zoning and r e s t r i c t i v e covenants against undesirable encroachment.
3. Freedom from the hazards of floods, earthquakes, or any other acts of providence.
4. Adequacy and accessibility of schools, parks, playgrounds, churches, stores, and places of employment.
5. Adequacy and cost of public transportation.
6. The sufficiency of such utilities as water, sewers, electricity, gas and such improvements as roads and walks.
7. The level of taxes and special assessments.
8. Neighborhood appeal.

In selecting the homesite, each of these factors should be weighed as carefully by the homeseeker as it is by the F.H.A. in order to rate and determine the quality of any given neighborhood.

After the selection of the general area, comes the selection of the site or lot itself. All lots are not good building sites. Your selection should have the best possible view, the best exposure. Some lots will never have proper sunlight, some are fills, some lie so low that the natural drainage of surrounding areas is through them. Lots on a hill may have too irregular contours to afford space for building without excessive costs. Lots on heavy "through-traffic" roads are not as desirable as those just *off*, on a side street.

Curved r e s i d e n t i a l streets are more attractive than straight streets, and can afford a more pleasing vista from each residence.

By i n s p e c t i n g and comparing properties, one gains much practical education and should be able to make a wise choice.

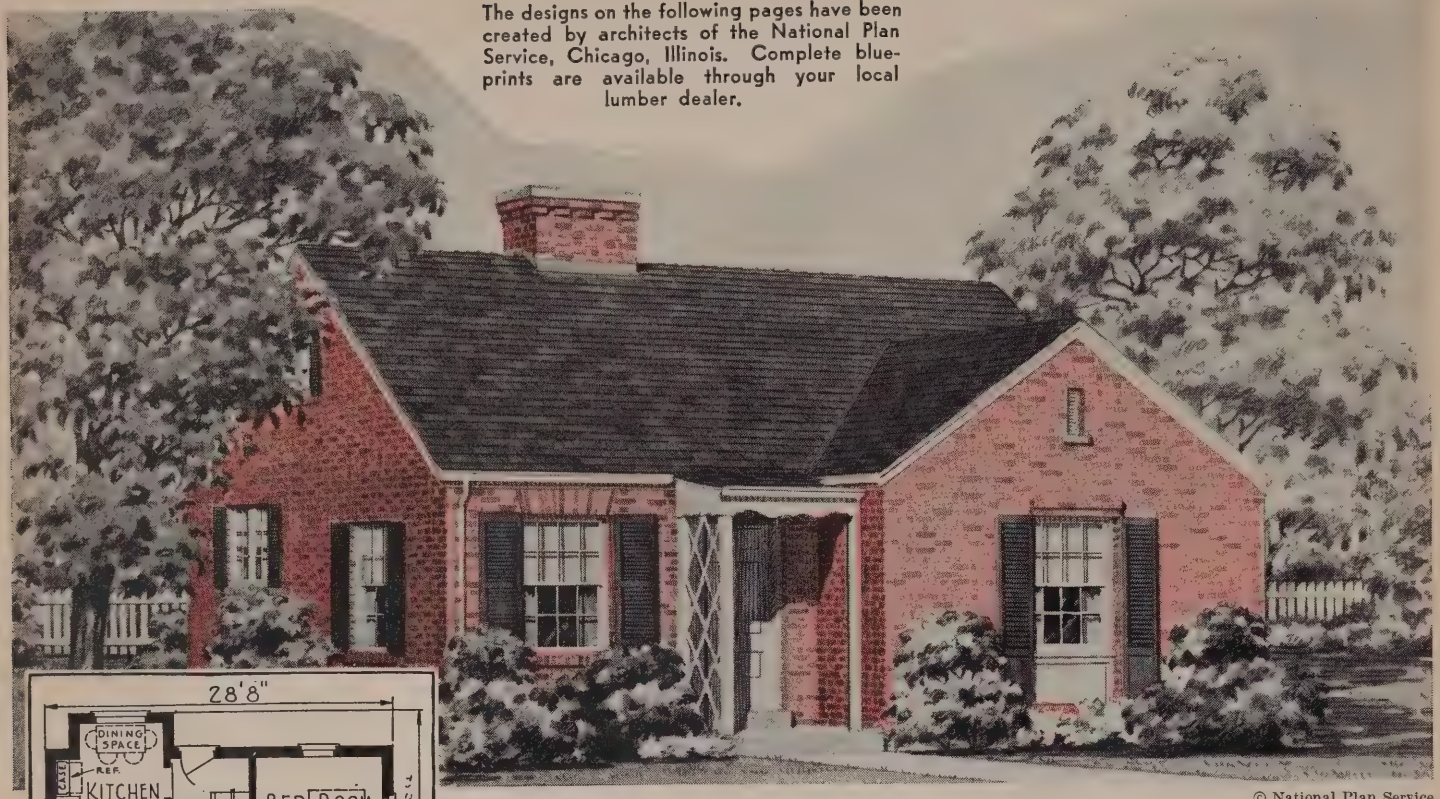
The land is the most flexible item in the total cost of a home. Construction cost is the same in a cheap location as in an expensive one. It would be foolish to build a cheap home in a fine residential district or an expensive home in a poor residential district. All of the homes should be in a price bracket. The value of the lot will ordinarily run from 10 per cent to 25 per cent of the construction cost of the building. A safe rule of thumb to follow is approximately one-fifth of the total investment should be in the land and four-fifths in the home.

Designs

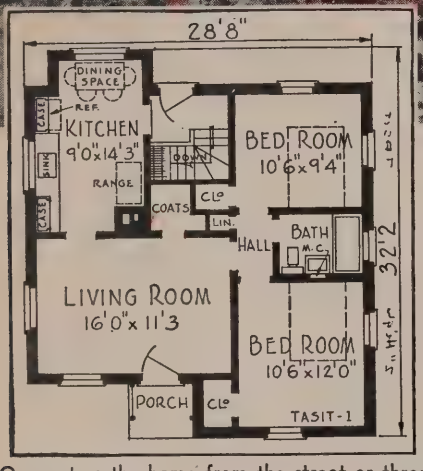
Here will be found 42 complete small homes carefully selected because of their livability and planning economies. They are particularly well adapted to Defense Housing because of low original cost. Complete blueprints and specifications can be obtained from your local lumber dealer. He can tell you the cost of duplication in your community. All of these houses have been approved for financing.

HOMES FOR DEFENSE and the FUTURE

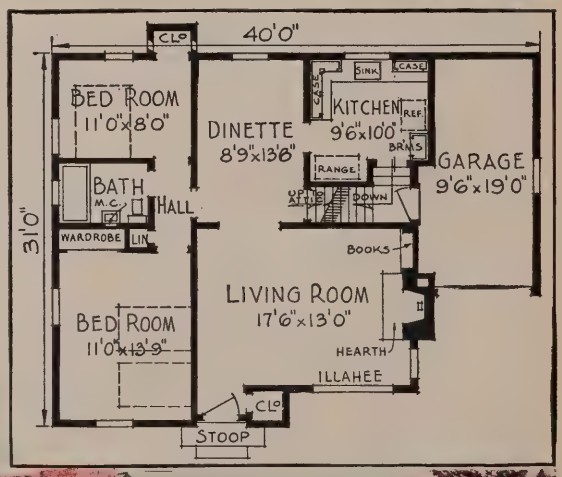
The designs on the following pages have been created by architects of the National Plan Service, Chicago, Illinois. Complete blueprints are available through your local lumber dealer.



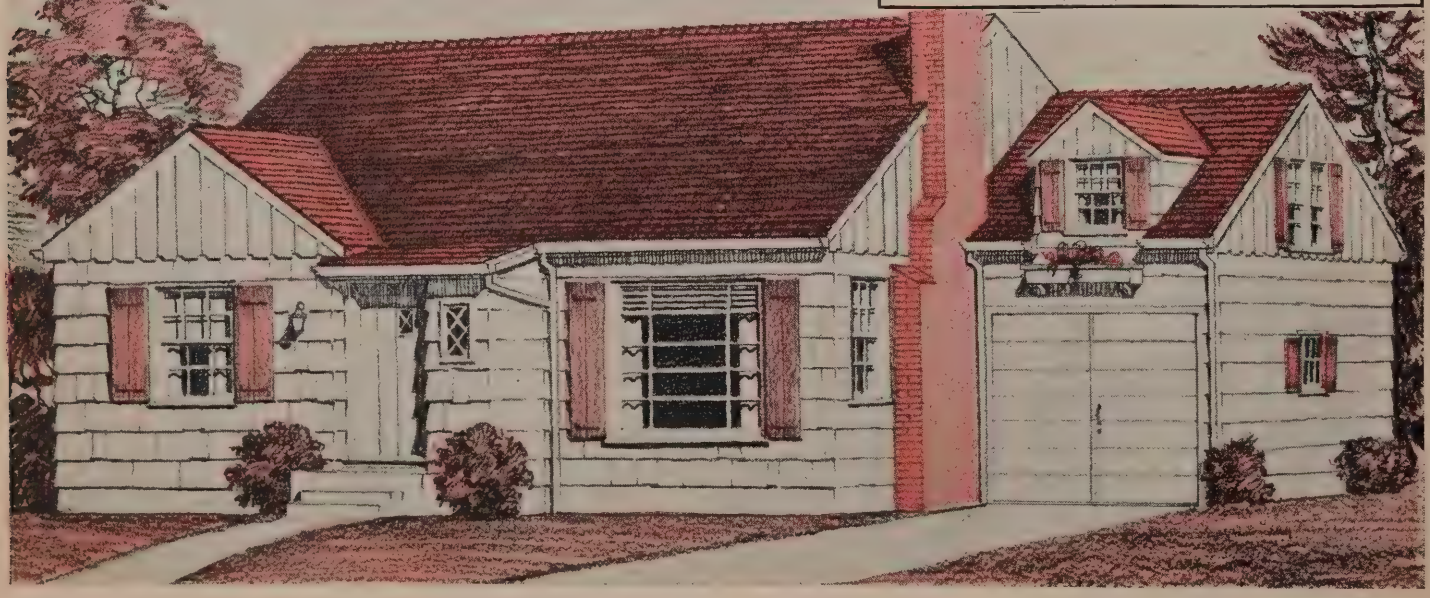
© National Plan Service

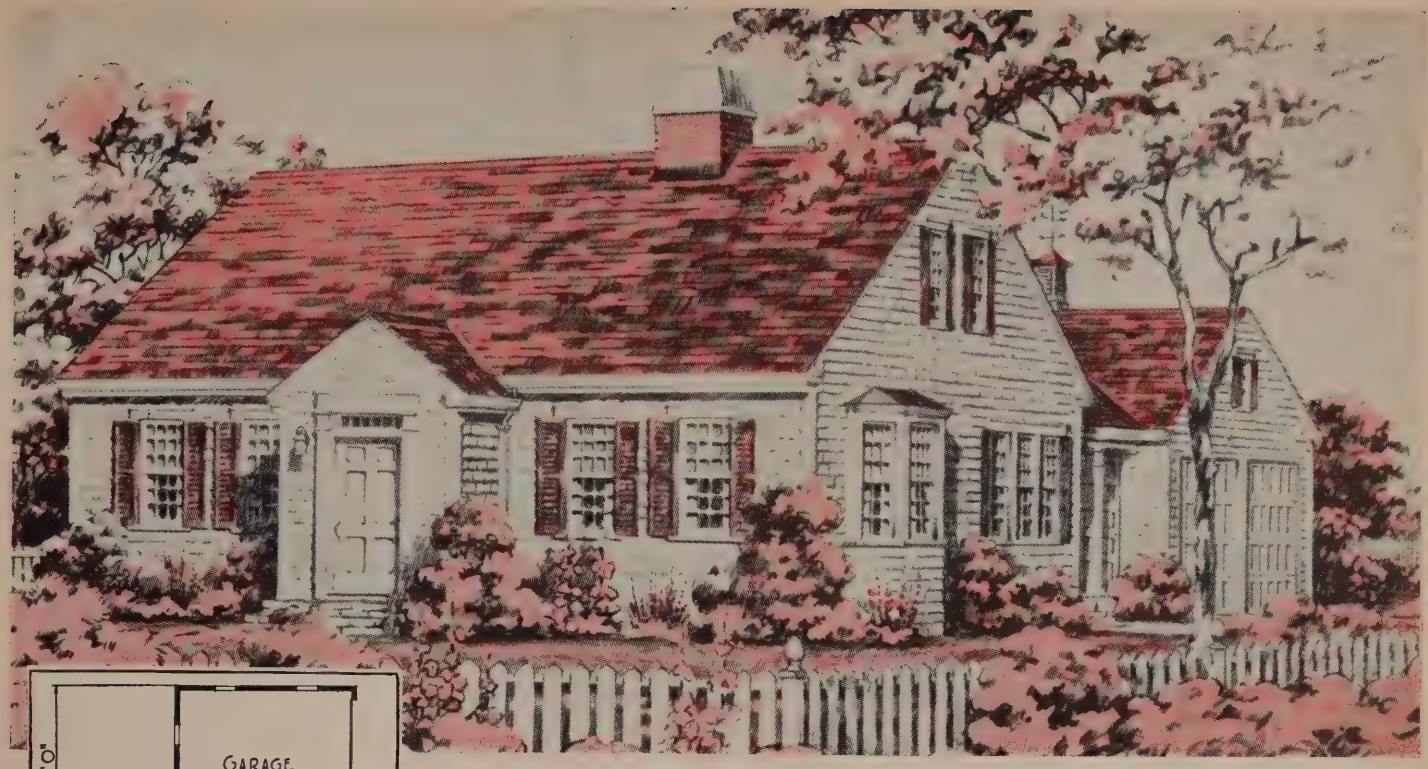


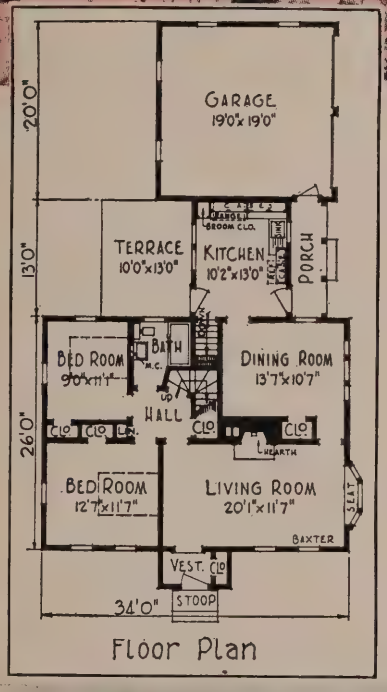
55. THE TASIT. A neat, trim Colonial home designed with colorful face brick for outside walls. Four rooms with five-room efficiency. Plans are available with or without a basement. Also plans two feet wider and two feet deeper with or without a basement can be obtained through your lumber dealer. ***House contains 15,830 cubic feet (plan shown); without basement, 11,900 cubic feet.***



56. THE ILLAHEE. A five-room home of convenience and simplicity. The attached garage increases the visual size. One enters the home from the street or through the garage. Both bedrooms have cross ventilation. Bookcases adjoin the living room fireplace. ***House contains 18,500 cubic feet.***





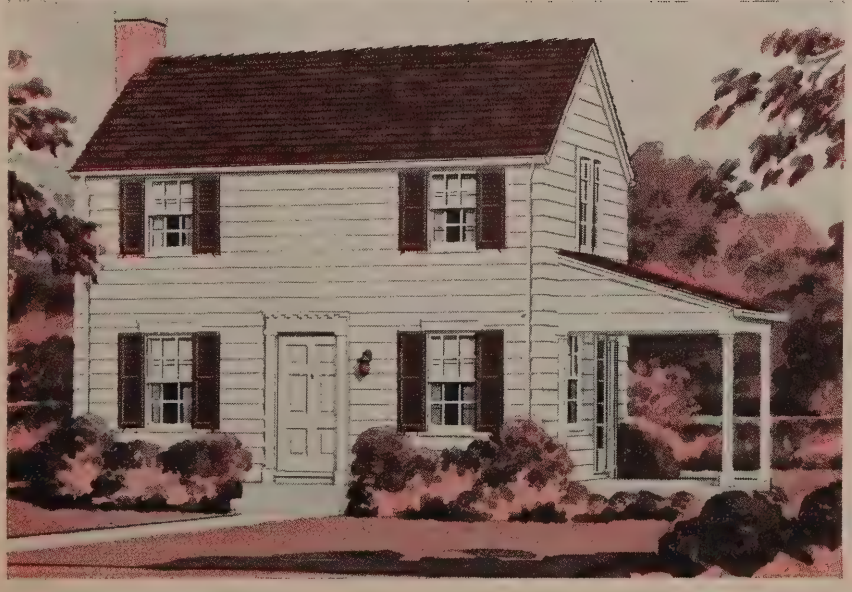


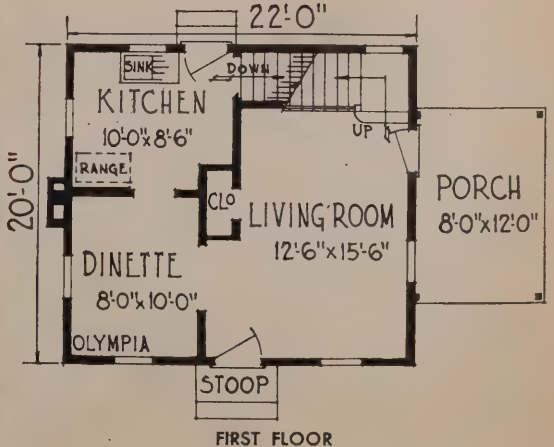
57. CAP'N BAXTER HOUSE. This house, with the Colonial atmosphere of Cape Cod, is an example of good architecture at low cost. This plan is a demonstration of the careful use of space and of easy circulation. The sidewalls are correctly shingled—butts provide shadow lines. *House contains 26,500 cubic feet.*

© National Plan Service.

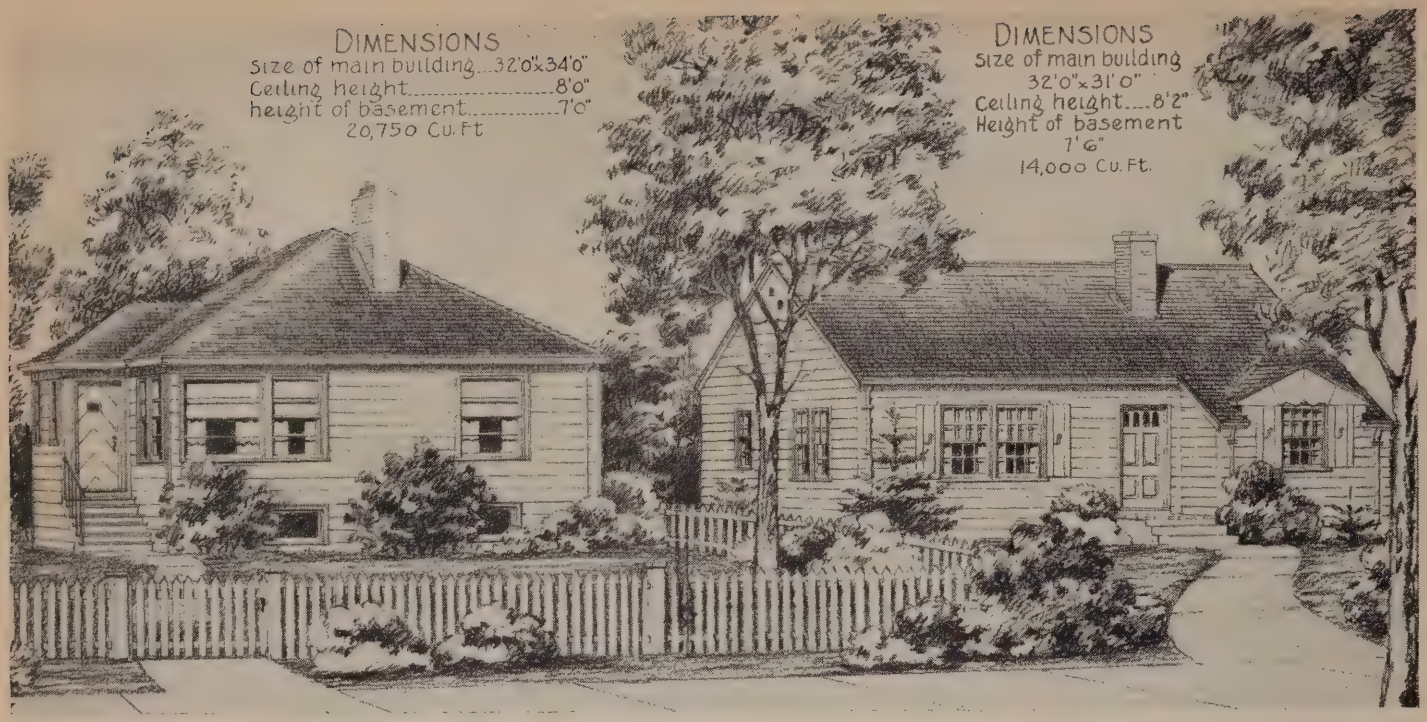
58. THE OLYMPIA. This Early Colonial design has a well-planned interior. The square type of home offers most room space for the amount expended. The house is of frame construction with an exterior of wide siding. *House contains 11,000 cubic feet; porch 480 cubic feet.*

SECOND FLOOR



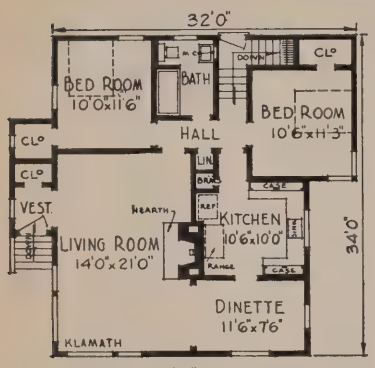


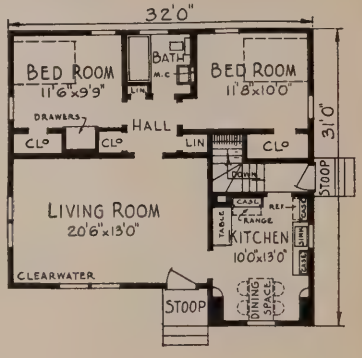
FIRST FLOOR



59. THE KLAMATH. **60. THE CLEARWATER.**

ABOVE is a street scene of interesting small homes with two bedrooms. Below are minimum houses with one bedroom or a livingroom-bedroom combination. These compact homes are especially recommended for summer or weekend use.

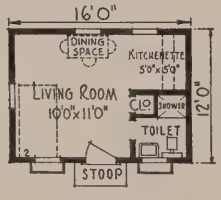




Floor Plan

DIMENSIONS
Size of Main Building...18'0"x15'0".
Ceiling Height.....7'6".
Cubage....2675 Cu.Ft.

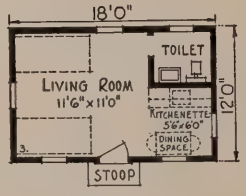
61



Floor Plan

DIMENSIONS
Size of Main Building...16'0"x12'0".
Ceiling Height.....7'6".
Cubage....2220 Cu.Ft.

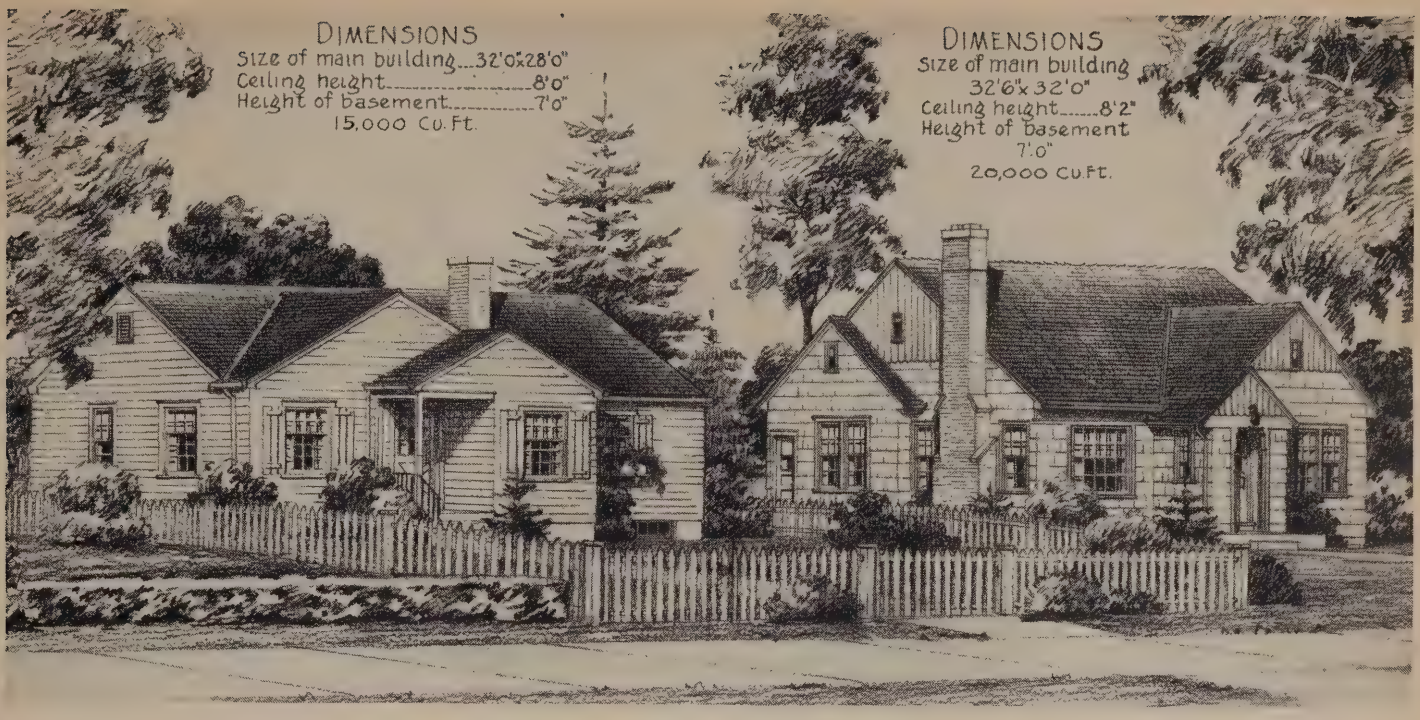
62



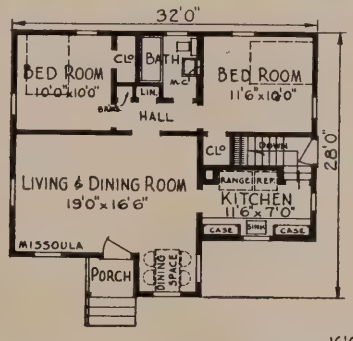
Floor Plan

DIMENSIONS
Size of Main Building...18'0"x12'0".
Ceiling Height.....7'6".
Cubage....2375 Cu.Ft.

63



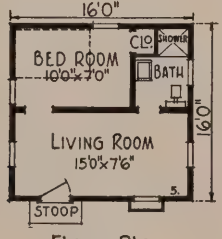
64. THE MISSOULA.



65. THE MINIDOKA.

Floor Plan
66.

DIMENSIONS
Size of Main Building 20'0"x16'0".
Ceiling Height.....7'6".
Cubage....3520 Cu.Ft.



Floor Plan
67.

DIMENSIONS
Size of Main Building 16'0"x16'0".
Ceiling Height.....7'6".
Cubage....2820 Cu.Ft.

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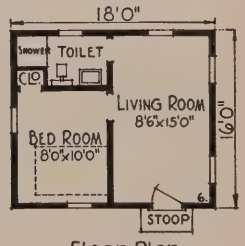
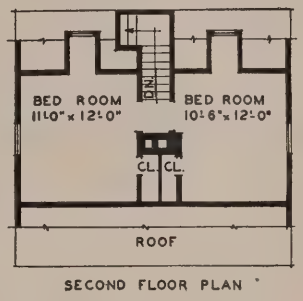


Floor Plan
68.

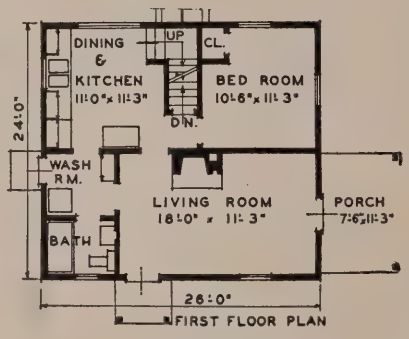
DIMENSIONS
Size of Main Building 18'0"x16'0".
Ceiling Height.....7'6".
Cubage....3170 Cu.Ft.

FARM HOMES . . .

This Model House and the Barn were exhibited by the Ohio Homes Foundation at the State Fair in Columbus. They were designed by Prof. R. C. Miller, of the Agricultural Engineering Department of Ohio State University and reflect the minimum requirements of healthful and efficient house-and-barn combination on the average farm. The two units—based on the estimates of retail lumber dealers in many sections of the state, and using FHA minimum construction standards —can be duplicated in most rural areas for $5,000.



SECOND FLOOR PLAN



FIRST FLOOR PLAN

WHEN you add modern conveniences to the farm home, you have "life at its best." Right at your doorstep are all the elements necessary for making your home just the way you want it; rural electrification for giving you all the modern conveniences of the city; intelligent, well-designed ideas for planning more comfortable, more convenient farm homes; and better, safer building materials for protecting the farm home from its two worst enemies—*fire and weather.*

Whether you live in the deep South, in New England, in the great Middle West or in California, the basic ideas of home planning remain much the same. Exteriors differ in various sections of the country, and in some areas you'll need a basement. Rooms are rooms, however, wherever you live.

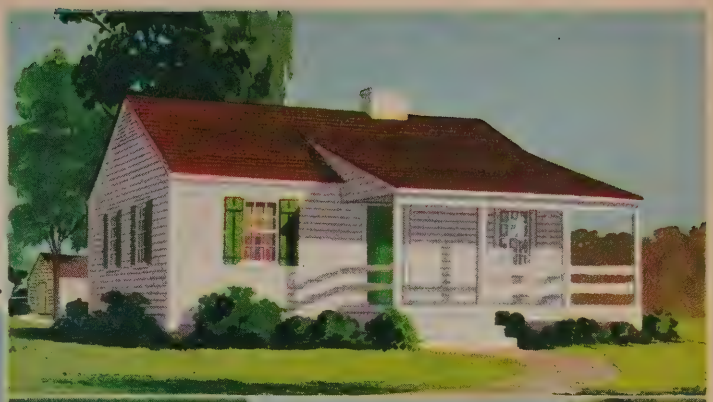
Due to the number of our readers who have requested information on farms, on the following pages we are presenting the outstanding developments on fundamental floor plans and room ideas made by the Government and the building industry. These principles can be applied to farm homes everywhere, new or remodeled.

Your local building material dealer can get any of the working drawings and specifications of the houses shown in this book. He is prepared to figure costs and work with the agencies of the government or lending institutions in making it possible for you to build the home of your choice.

We hope that the material presented here will give you suggestions for making your home a more enjoyable "place for living".

"ENGINEERED"* HOMES

The designs on the following pages were developed by the National Homes Foundation and the government as a guide for home builders. Complete working drawings and specifications can be secured through your local lumber dealer.



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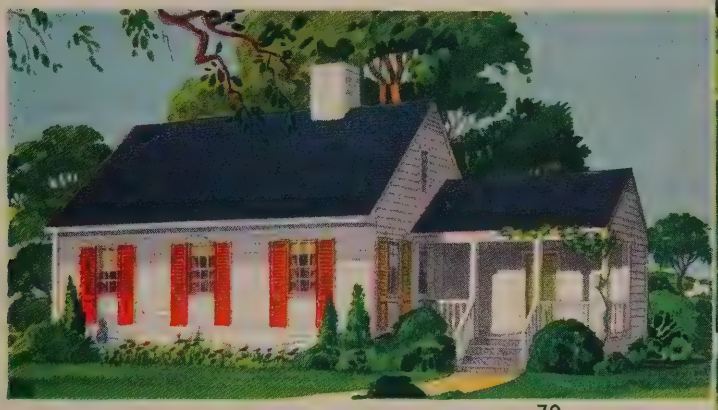
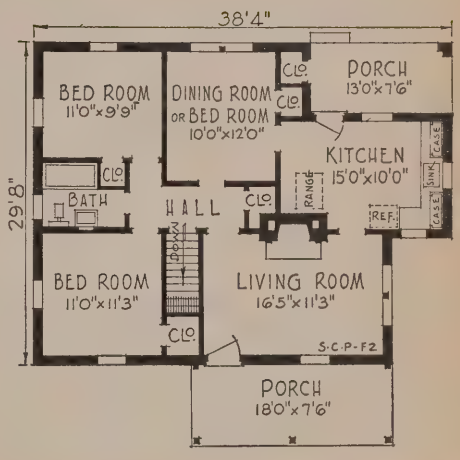
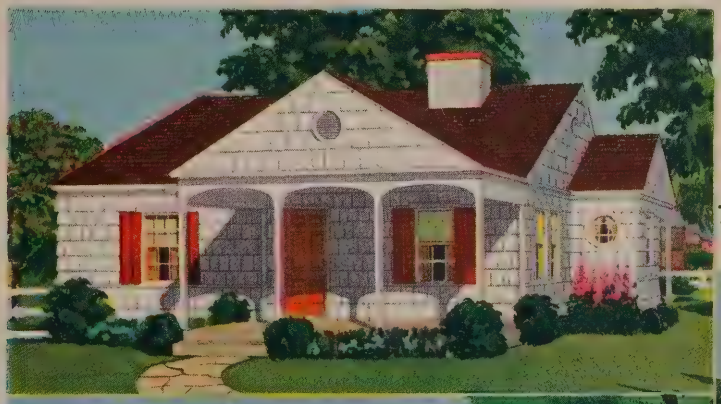


70.

71.

69. Lumber and Wood Products F-1
70. Asbestos Cement Roofs and Walls F-1
71. Brick and Burned Clay Products F-1
72. Red Cedar Shingles F-2
73. Lumber and Wood Products F-2
74. Plywood Walls, Floors and Interiors F-2





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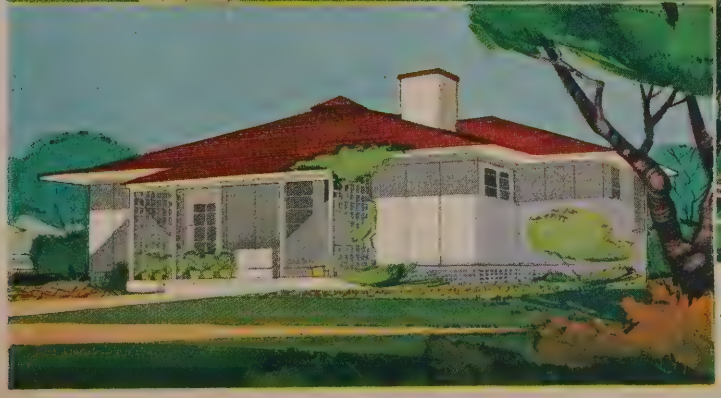

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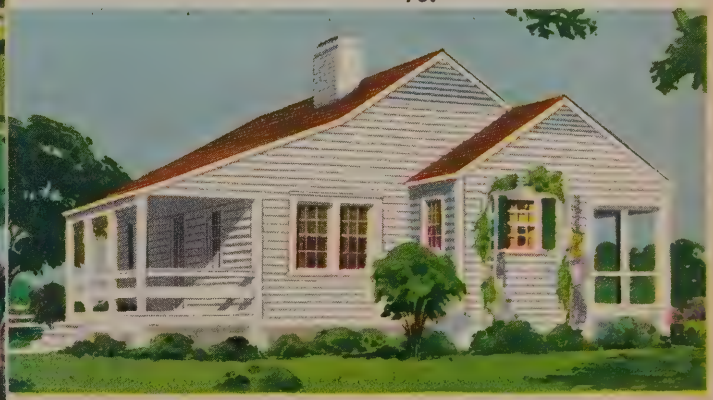
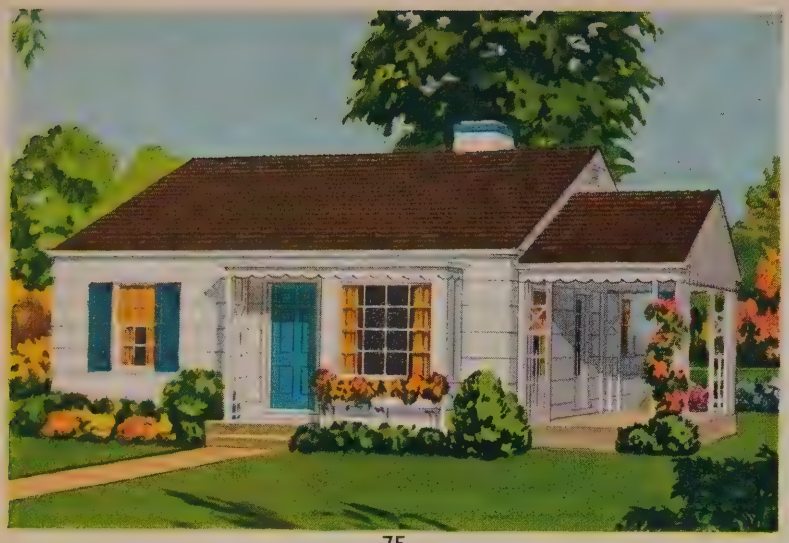


*Manufacturer-advertisers have prepared practical construction details and design suggestions showing the application of their particular products to plans above. See pages Second Cover, 232, 238, 246, 255, 257, 258, 264, 268, 269.

"ENGINEERED"* HOMES

(Continued)



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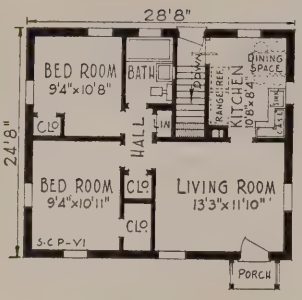
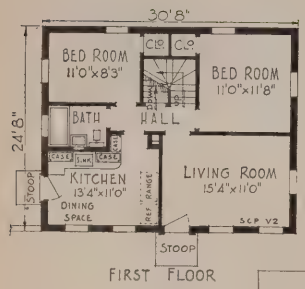
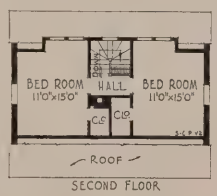
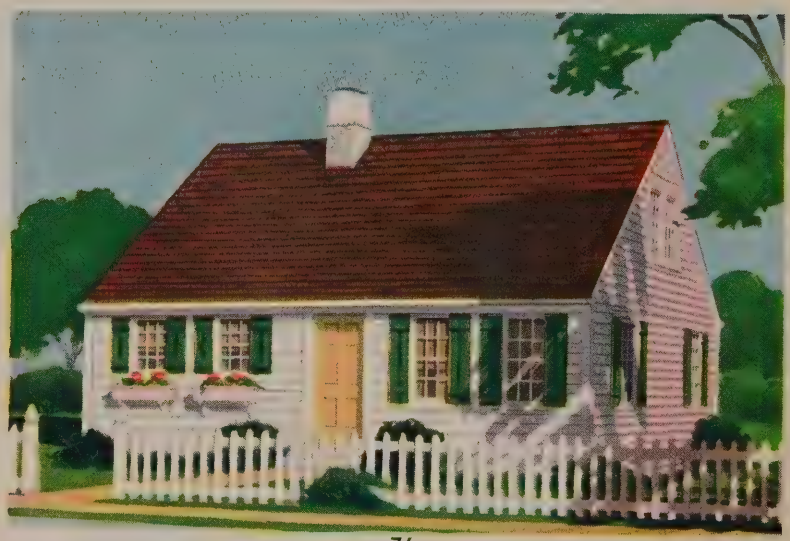






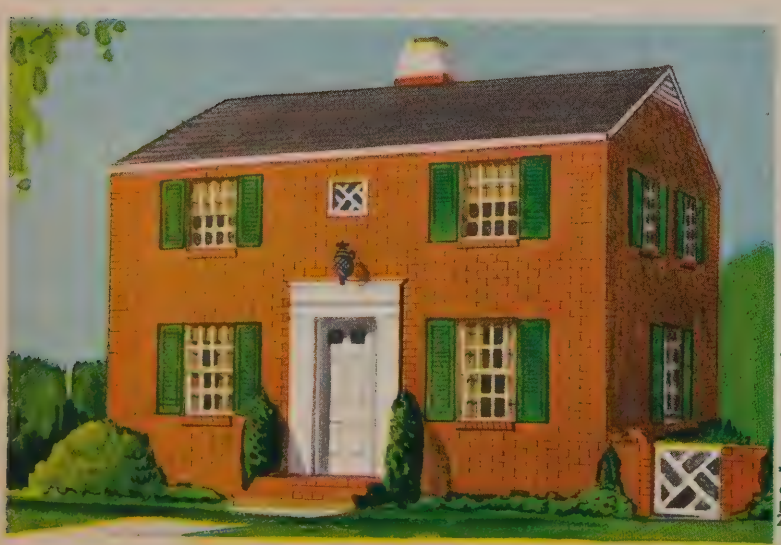


76.

75. Red Cedar Shingles V-1

76. Lumber and Wood Products V-2

77. Brick and Burned Clay Products V-3



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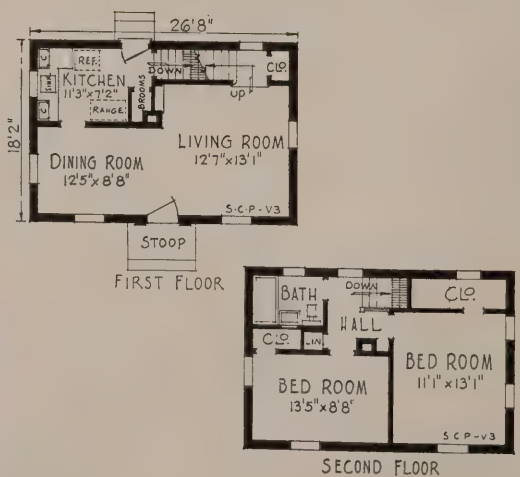
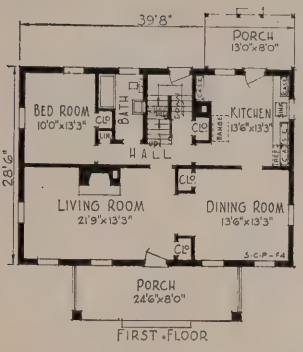
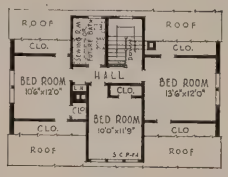


*Manufacturer-advertisers have prepared practical construction details and design suggestions showing the application of their particular products to plans above. See pages Second Cover, 232, 238, 246, 255, 257, 258, 264, 268, 269.

"ENGINEERED"* HOMES

(Concluded)





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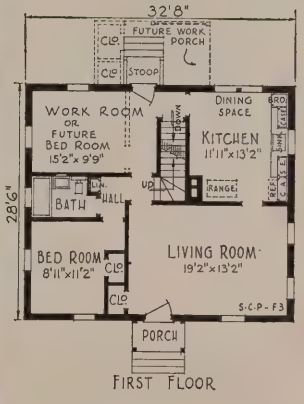
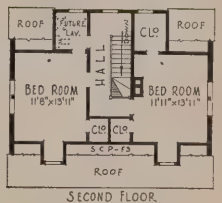


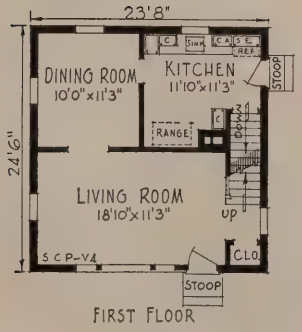


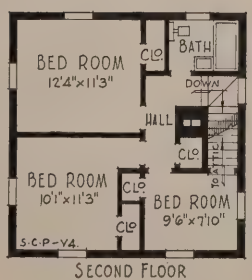
78. Red Cedar Shingles F-4

79. Asbestos Cement Roofs and Walls F-3

80. Plywood Walls, Floors and Interiors V-4

*Manufacturer-advertisers have prepared practical construction details and design suggestions showing the application of their particular products to plans above. See pages Second Cover, 232, 238, 246, 255, 257, 258, 264, 268, 269.





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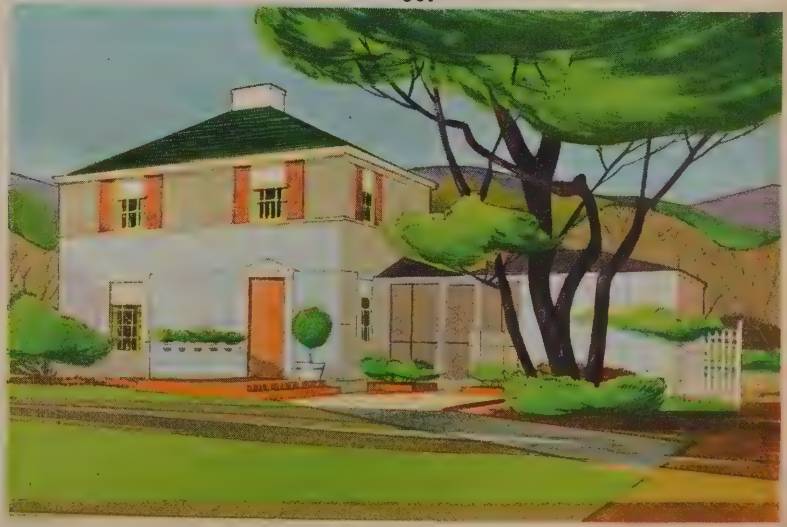
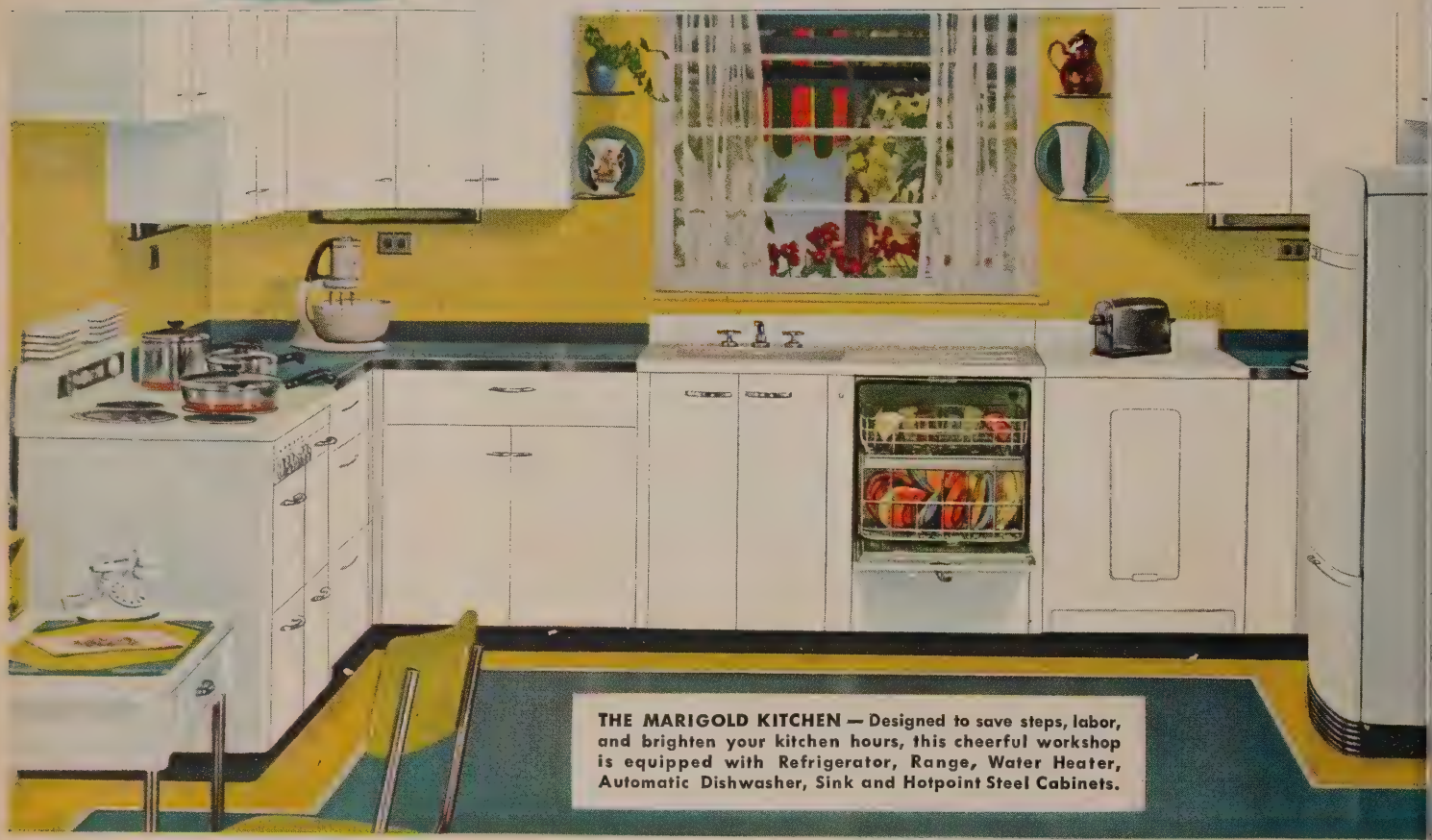


Your Kitchen And You Get A New Lease On Life!

—When You Go Modern All The Way With Thrifty Hotpoint Labor-Saving Appliances



THE MARIGOLD KITCHEN — Designed to save steps, labor, and brighten your kitchen hours, this cheerful workshop is equipped with Refrigerator, Range, Water Heater, Automatic Dishwasher, Sink and Hotpoint Steel Cabinets.

THIS IS THE YEAR to modernize your workshop—and your way of living—with those economical Hotpoint servants that take over your tiresome, youth-robbing chores. For prices are amazingly low, and payment terms are more convenient than ever!

Think of the many ways in which a modern Hotpoint All-Electric Kitchen contributes daily to the health and happiness of your whole family! Your meals are cooked the clean, safe, flavor-retaining electric way...if you wish, automatically, while you're away from home!

You save on food and electric bills with the new refrigerator. Food wastes are flushed away before they become garbage. You have plenty of hot water always handy—heated safely, conveniently, economically—the electric way. And at the touch of a button, dishes are washed sparkling clean, rinsed and dried.

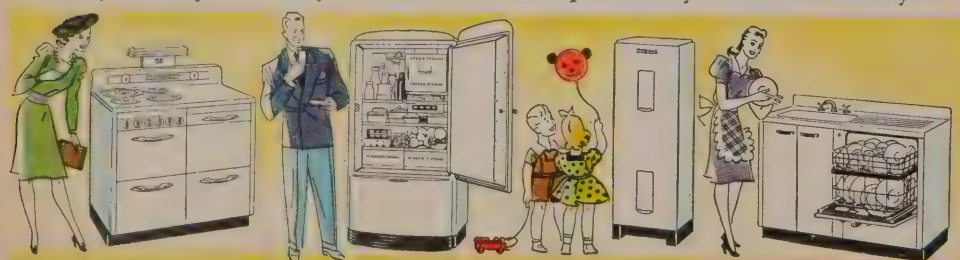
Investigate Hotpoint's Friendly Finance Plan before you modernize your home. Send coupon below for Kitchen Plan of home you prefer and detailed information about these Hotpoint appliances powered by low-cost electricity.

If remodeling you can install this Hotpoint Electric Kitchen for as little as $8.00 weekly—other kitchens for as low as $4.00 weekly. Kitchens in new homes can be financed along with the house. Thus a Hotpoint Electric Kitchen costs only a few cents a week more than an ordinary kitchen.

Hotpoint

ELECTRIC KITCHEN APPLIANCES

REFRIGERATORS • RANGES • WATER HEATERS • WASHERS AND IRONERS • CLOTHES DRYERS • AUTOMATIC DISHWASHERS • ELECTRASINK • STEEL CABINETS



Hotpoint Electric Range has Hi-Speed Calrod cooking units with 5 accurate, economical Measured Heats.

Hotpoint Refrigerator is equipped with Butter Conditioner, Giant Bottle Space and other features.

Hotpoint Electric Water Heater furnishes a constant supply of hot water at the right temperature always.

Hotpoint Automatic Electric Dishwasher washes, rinses and dries the dishes without hands touching water.

Hotpoint has prepared Kitchen Plans for each of the 12 engineered packaged homes as shown in this issue on pages 225 to 228. Send coupon for kitchen of home you like.

EDISON GENERAL ELECTRIC APPLIANCE CO., INC., 5689 W. Taylor St., Chicago, Ill.

Send me, without obligation, Kitchen Plan for

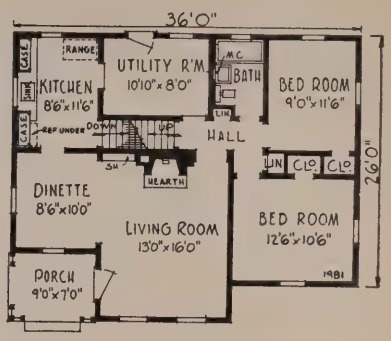
Home No._____ as shown on page_____.

*Name*_____

*Address*_____

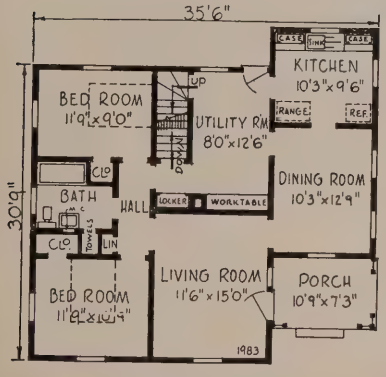
*City*_____ *State*_____

81. FARM HOUSE NO. 1981

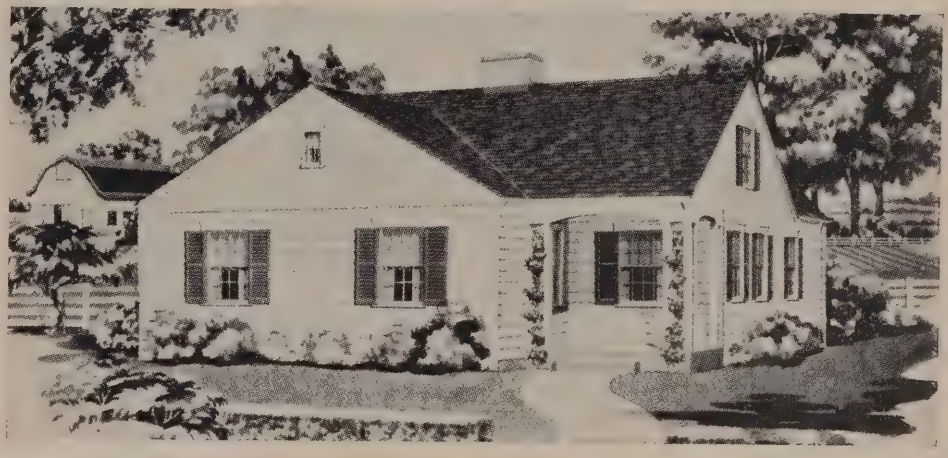


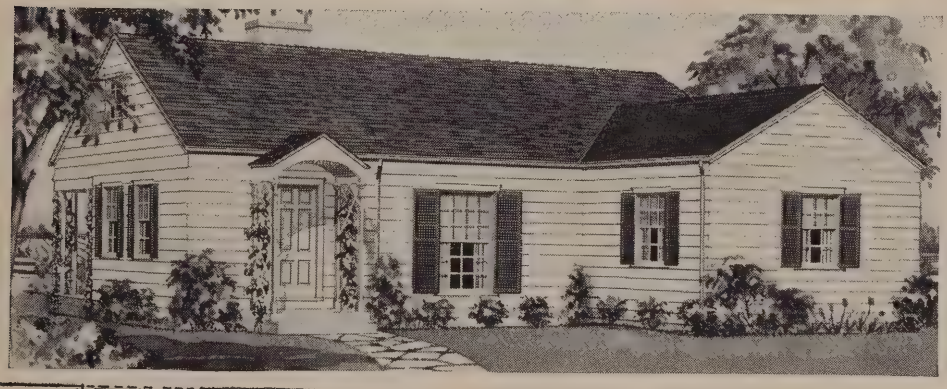
FLOOR PLAN

82. FARM HOUSE NO. 1983

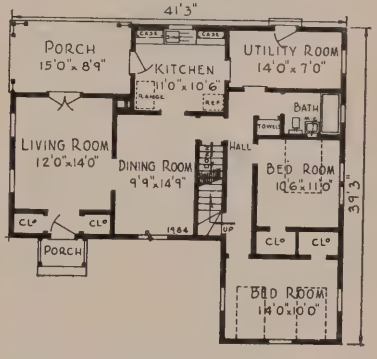


FLOOR PLAN





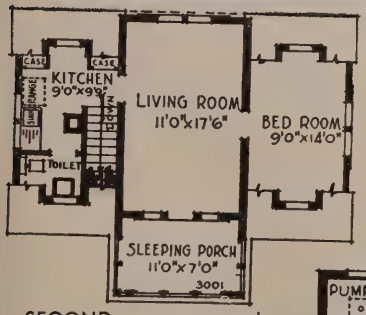
83. FARM HOUSE NO. 1984



FLOOR PLAN

84. COMBINATION UTILITY BUILDING AND HOME

NO. 3001



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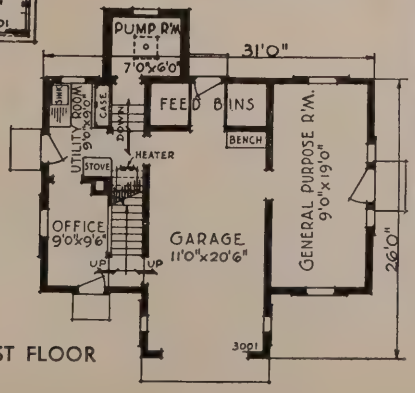
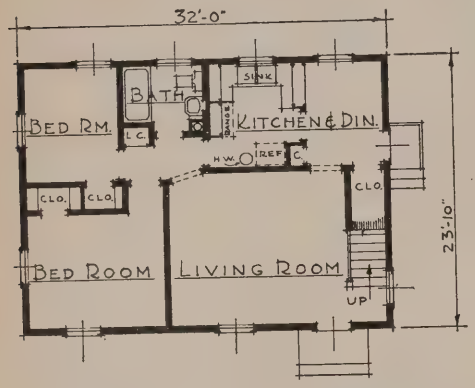
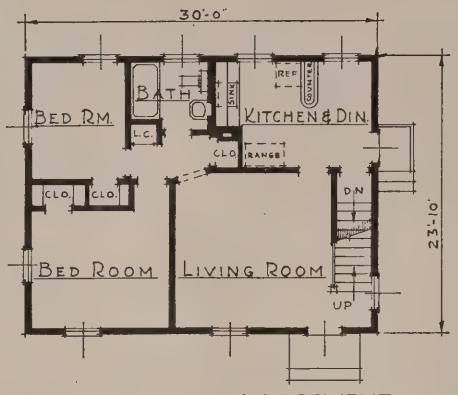


FIRST FLOOR

NINE BASIC FLOOR PLANS CAN HAVE



A. PLAN WITHOUT BASEMENT



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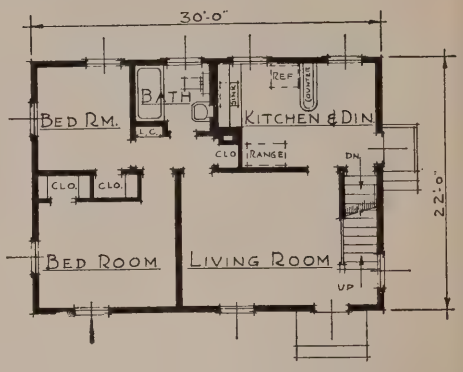

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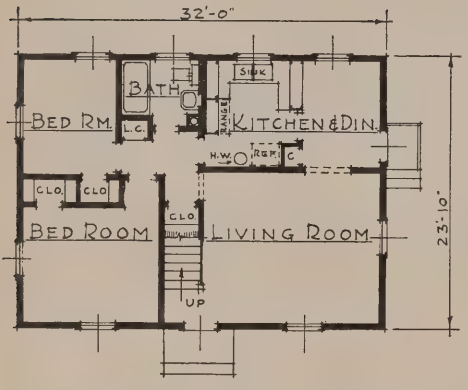

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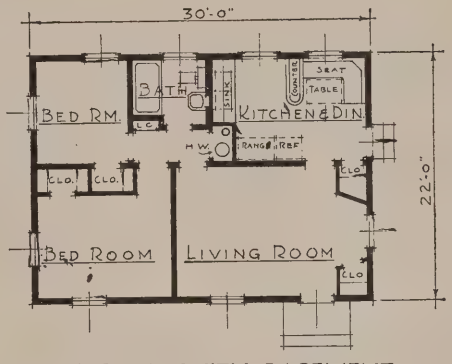

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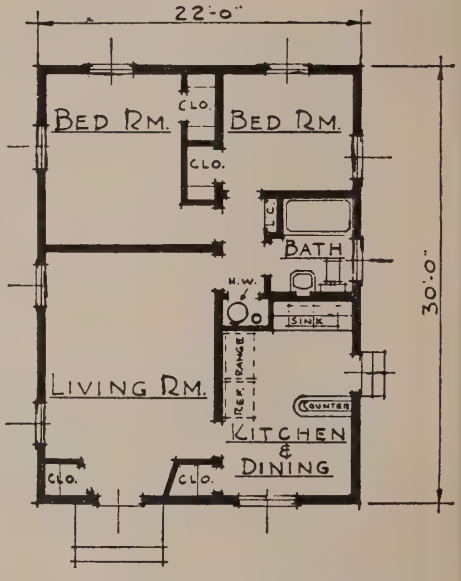
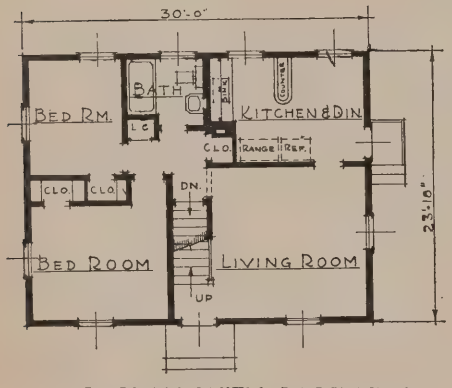
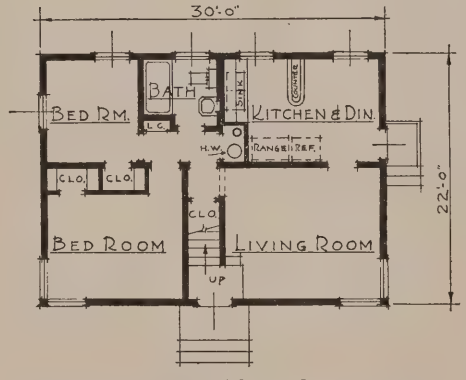


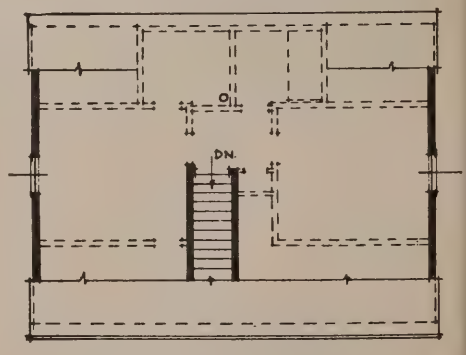
I. PLAN WITHOUT BASEMENT



C. PLAN WITH BASEMENT

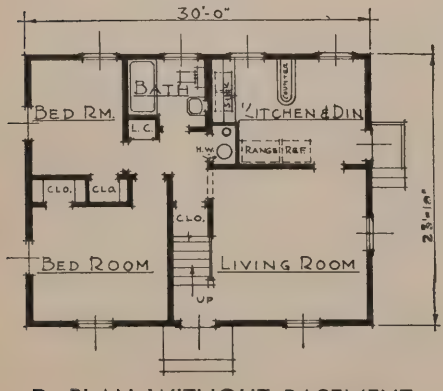


G. PLAN WITHOUT BASEMENT



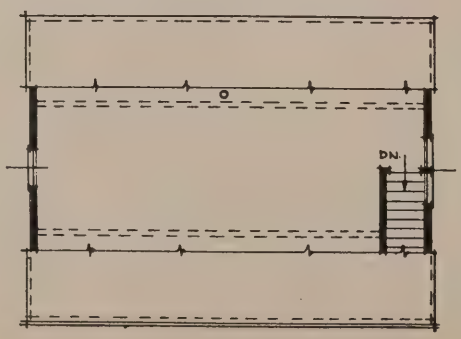
ATTIC PLAN FOR "C"

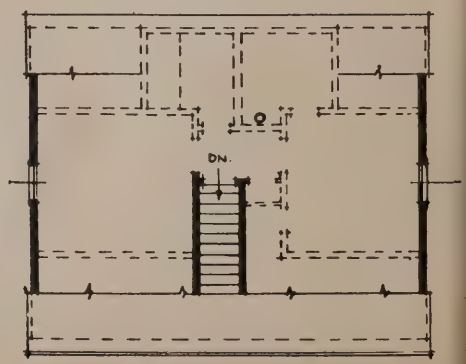
ATTIC PLAN FOR "B" →



D. PLAN WITHOUT BASEMENT

ATTIC PLAN FOR "A"





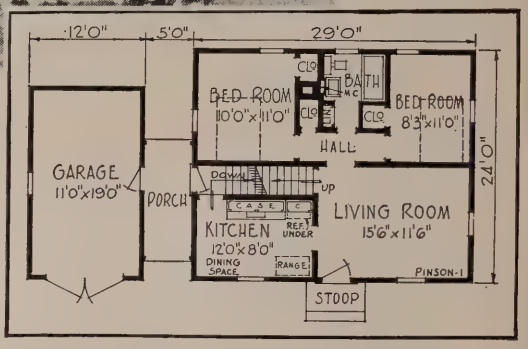
ANY OF THESE NINE EXTERIORS!

These can be obtained from your local lumber dealer
or ordered from Certified Homes Bureau, Buffalo, N. Y.

85 86 87

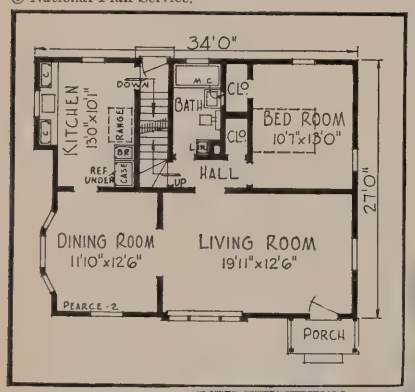
88 89 90

91 92 93

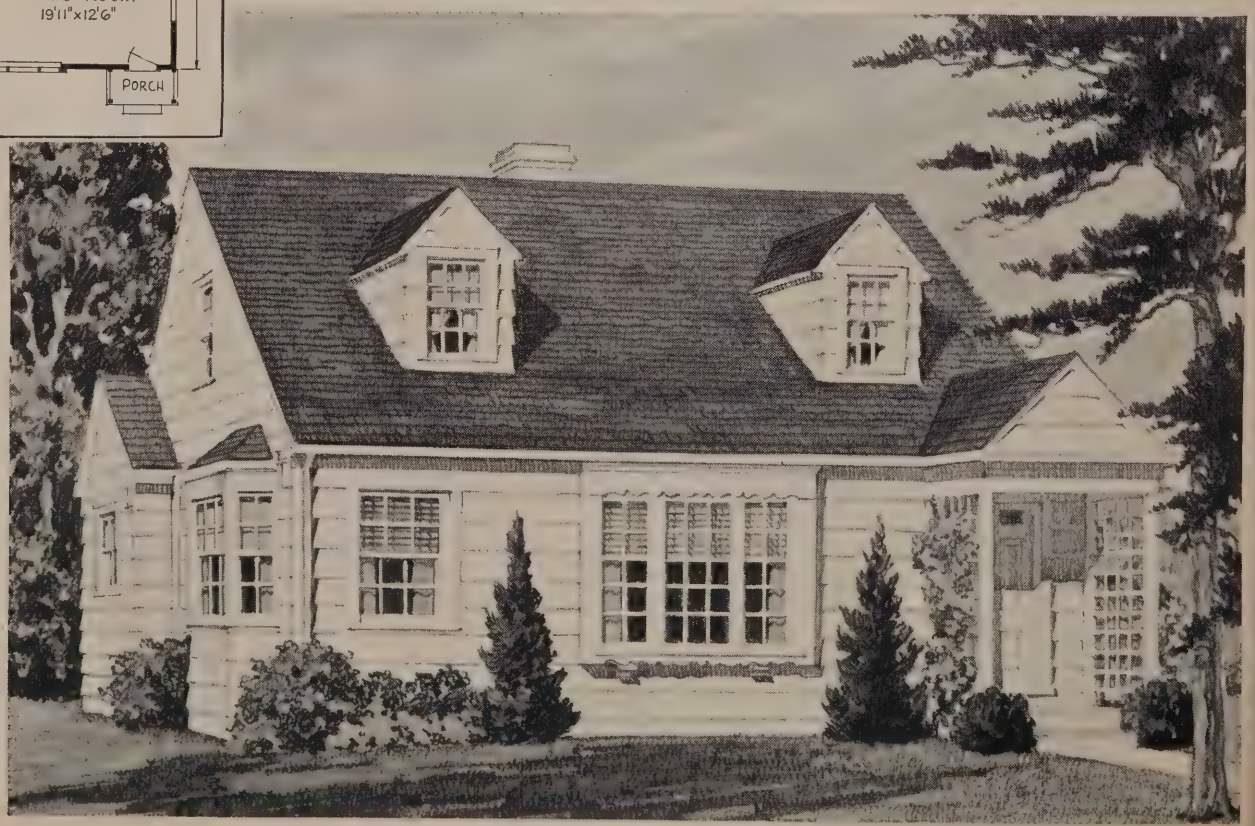


94. THE PINSON. The garage, although not a part of the main house, is connected to it by a porch to attain the pleasing effect of wide low lines in the entire design composition. It is a practical idea also, in that the garage is convenient and accessible in bad weather. *House, 14,900 cubic feet. Garage 2,760 cubic feet.*

© National Plan Service.



95. THE PEARCE. A compact four-room home which contains in itself a full dining room and the many other essentials usually found only in larger residences. The inclusion of the attic stair suggests the possibility of a future second floor development, should necessity arise, and without costly alterations. *House contains 16,740 cubic feet.*



Financing

Is a home a good investment? Yes, the homeowner shelters his family at actual cost. A home, when wisely purchased, gives a sense of security and satisfaction that comes in no other way. It creates recognition of ability to earn, save, and wisely invest money. The homeowner's credit is improved because he has a stake in his community, and he is regarded as a substantial citizen. He can deduct taxes and interest from his income tax returns. Many states exempt a home under $5000 from any taxes. Finally, after the home is paid for, the family can enjoy rent free for the rest of their lives!

FINANCING THE HOME . . .

BUILDING a home is one of the most important business transactions most people ever engage in. Without the ability to finance in a sound and sensible manner, there is little use in planning. Without assistance, it is beyond the average person's ability to pay for the construction. If this initial step is taken with care and forethought (taking advantage of the advice and safeguards that are yours for the asking) the result will be all that could be desired.

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Building and Loan Associations are perhaps the originators of the amortizing mortgage loan system of home financing. These have been greatly encouraged and supported by the government through the Federal Home Loan Bank Board. Today they are among the most active home financing institutions in many localities. Savings banks have also been actively engaged in home financing particularly in connection with complete residential developments.

Some few years ago, the government also inaugurated a program to provide for average family homes which could be acquired without the long-drawn-out and expensive processes that have often been associated with home-ownership. This program, which also provided for long term loans, helped greatly to stimulate small home building through the country. It helped to do away with the mortgage renewal nightmare, and with excessive interest charges. Some predicted a short life for the entire scheme. Contrary to all of the forecasts, the program has flourished, and helped to develop a market for small homes that has never been paralleled. This was accomplished by the National Housing Act, setting up the Federal Housing Administration, known throughout the country as the FHA.

By this time the average individual understands that the FHA does not lend money directly on mortgage or otherwise. Its function is to insure the mortgage made by a bank, building and loan association, or insurance company, and thereby share the risk which formerly was carried by the lending institution alone. Many of the lenders in the three classes above, are what are known as "FHA approved." This means that their method of transacting business, and general financial standing, is such that the FHA will insure mortgages they take, up to a certain percentage of the total figure, and thereby insure them against anything but a small possible loss. It does not mean that active Building and Loan Associations or Savings Banks are not equally dependable or render a less valuable service to the home owner.

Naturally the FHA has the privilege of search and inspection, and of supervision of the building; and you pay a small and altogether fair, one-half of one percent for the accommodation they offer. Active Building and Loan Associations and Savings Banks also render the same services to the home owner at very reasonable cost. The average man, interested in his small home, never spent money to better advantage. Without the FHA members, accredited Building and Loan Associations and better Savings Banks he would probably still be paying high interest, renewal fees every three to five years, plus bonuses to the broker without whose services he probably could not get the loan in the first place. As a matter of fact, through these home financing groups, there has been a tremendous increase in individual home ownership, and incidentally in the quality of house that is available at a price.

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No one can overestimate what the building up of a nation of home owners means to the country, and what the taxes they pour into municipal treasuries will mean to the development of thousands of communities throughout the land.

There is the additional benefit to be derived from the inspections that FHA makes during the course of construction. From the time that ground is broken until the ridge board is in place, the building is subject to close scrutiny by FHA experts, who see to it that specifications are followed, and that sound building practice is adhered to. Nothing is covered up until such time as the inspector has made his examination and given his written approval. With loans running as long as twenty years, good construction is essential. To the home owner, with maintenance to be considered, it is equally important.

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There is still another benefit presented by the FHA method of insuring mortgages. Probably all of us have had occasion during our lifetimes, to have heard of an unfortunate individual who invested his life savings in a home, without due consideration or advice, only to wake up to the fact that undesirable building or development was going on right next door to him. The ultimate result was that his property was damaged in value, and in many cases unsaleable as a dwelling. The "trend" of the surrounding community, its restrictions and possibilities, are checked and considered before the FHA will undertake to insure the mortgage. This service is also included for their own protection in loans by Building and Loan Associations or Savings Banks. This is important to all the parties to the loan, but particularly to the owner, who is reducing his mortgage each month, and thereby increasing his equity and investment.

The actual mechanics of securing an FHA insured mortgage are less complicated than one might think, and they are based on very hard common sense. To begin with you either must have a piece of property free and clear to build on, the value of which must equal the down payment required, or you must have the cash with which to make the down payment. In the second place you must have proof that you have an income sufficient to meet the monthly payments of interest and amortization. Requirement number one prevents over-ambitious people from "building on a shoe-string," and requirement number two prevents their "biting off more than they can

chew." Both mistakes used to be quite common, and nobody cared as long as the property was worth the mortgage.

After you have your lot or the required down payment, you select either a savings bank, savings and loan association, or insurance company, and make application for the loan. You submit your contractor's estimate for the building of the house. Plans and location are gone over thoroughly. Your personal record and position or income are checked, and a preliminary statement made up which will show you how much your property is valued at, and how much it will be worth when the house has been completed. With this you will get the amount that you are required to pay each month. If everything is mutually satisfactory, a temporary loan is arranged for the building contractor which he gets in part payments as he completes the job, and when the house is up the mortgage is written and executed. The contract you sign covering the temporary building loan is necessary because the mortgage is on the completed house and lot, and as a matter of course cannot be written until such time as the house is completed.

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The monthly payments that you make under an FHA insured mortgage does two things. It pays the interest, and reduces the principal so that your equity or real ownership in the property increases each month. You are actually compelled to save and invest in a proposition that has had expert consideration and examination, and which is virtually endorsed by the United States Government. If there is anything safe and sound in the world today, your well financed home should be that.

As a general rule the payments that are made are not in excess of the amount that would be required for rental of an equivalent house, and in many cases they are less. The advantages of having comfortable quarters in which to live, and a home that meets with your individual requirements (plus a sound investment) are all combined in the one carefully-financed home!

The popularity of the FHA system of home mortgage insurance, has been very well demonstrated by the necessity of several amendments of the National Housing Act. Under these the country is assured of a continuation of the present Federal Housing Administration's program. An additional billion dollars, for loans under Title II, and loans under Title I for improving existing structures has been raised, and the length of time during which the loan may stay in effect has been increased.

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Exactly what the advantage may be to any particular individual, in deciding from whom he would request the granting of a home mortgage, is hard to decide. Local conditions and interests play a large part in every community, and in a general sense it might be said that any reputable person would do better to make his commitments with a local organization to whom he is known. The primary function of the Savings and Loan Associations is to lend money on mortgage, and few are better versed in local values and requirements than they.

Nothing on the subject of small home financing is complete without some mention of the part played by local progressive lumber dealers in the active homebuilding of the past few years. They have rendered a distinct service to their communities in the distribution of sound advice in building matters. As the actual source of the material that goes into the construction of a house, they know material values and reputations better, probably, than any one else. The advantages of certain building products over others is an old story with them, and quite naturally so because they buy and sell them every day. As a source of sound advice on financing, as well as on materials, they deserve the prospective home builders' confidence. Ask your local dealer!

The drain on the available building material stocks, and the diversion of a great part of the manufacturers' output by priorities or new industrial plants, makes the modernizing and rehabilitation of existing dwellings a vital factor in providing satisfactory living quarters for the nation's host of workers.

The modernizing of an old building is easier and more economical to accomplish today from the material angle, than ever before. Literally scores of innovations in building materials and equipment offer shortcuts and labor-saving features undreamed of only a few years ago.

Modernizing need not be a makeshift by any means. As a matter of fact it is generally accepted that many of the new wall boards, panel coverings, and finishes that are replacing old fashioned lengthy-procedure wall jobs, are better from a structural and insulation angle than their predecessors. Most of these can be used and applied to a job in a few hours that formerly would have taken two or more days.

By a fortunate twist of circumstances, the country has already developed the ways and means to meet the modernizing problem as well as the building problem that defense measures have made necessary.

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Repair and renovation in an existing structure is part and parcel of the present day requirements. Insulation means the saving of fuels. Painting means the preservation of lumber, and the doing away with the necessity for replacements. A good general overhauling means that mechanical equipment will not fail and require parts and labor to put it in shape again.

The administration, with farsighted anticipation, is encouraging all this with appropriate agencies to make the work possible by means of modernizing loans.

Perhaps rents will go higher, and perhaps material for new structures outside of defense areas will be impossible to get. Look into the possibilities of any house you own or an old one you can buy! See what the modernization program means to you and to your property.

Amortization Financing for Your New Home Through

A NEIGHBORHOOD SAVINGS and LOAN ASSOCIATION

THE American home-seeker can compare his situation with that which existed only a decade ago and reflect with satisfaction upon at least four definite advantages—aside from those afforded him by the many improvements in materials and building methods—which are his today. Of utmost importance, because they have to do with paying for his home, these advantages are:

1. *The "direct-reduction" loan plan* through which he can make a small down payment and pay the balance in monthly instalments extending over 15 to 25 years, paying interest only on the unpaid balance of his loan. (This instead of the old-style "lump" mortgage which had to be paid off or renewed, with heavy fees, in three to five years.)
2. *The lowest interest rates in the history of home mortgages,* with the amount of interest declining each month.
3. *Freedom from the necessity for a second or third mortgage* with their extortionate interest rates, since the original loan is on a new and liberal basis up to 80% or, under certain conditions, even more.
4. *Protective services* which assure a better quality home than ever before.

Of course, that isn't the whole story of the advantages, because today's home-seeker also may deal with institutions which can protect him to a degree impossible as recently as a decade ago. The reason for this is that many institutions, once dependent solely upon their own resources, now have ample credit reserves to fall back upon. These are your local *Savings and Loan Associations!* They are members of the Federal Home Loan Bank System, which serves nearly 3,900 such institutions, with assets of more than $5,000,000,000.

There are a number of financing plans which are available to home-seekers, but this particular story is concerned with the "savings and loan" plan which, though used for generations by leaders in the savings and loan field, has been adopted by most other institutions only in recent years. Savings and loan associations originated the amortized, or monthly-payment plan for home mortgages, and there very likely are such institutions in your community which will welcome an opportunity to serve you.

If you've been enjoying the thought of building or buying your own home, you want to know definitely if you can "swing it." If you are an "average" American home-seeker, you will want to make a nominal down payment and borrow the balance to pay for your home, and you want to know what to do.

For Help and Sound Advice

A natural source of counsel is your neighborhood Savings and Loan Association, a "specialist" in home ownership — the only job, in fact, such an institution does. You drop in at the association and have a talk about the house you want to build—about costs and down payments and interest and such. You explain that you earn an average of, say, $2,250 a year and would like to have a house to which an extra room might be added some time in the future. But you frankly admit you haven't the slightest knowledge as to how nearly your ideas of the house you wish to build will match the price you will have to pay—after all, you're just an average citizen, not an expert.

Well, a conservative rule to follow is that a house should cost not much more than twice the family's yearly income, says the savings and loan man, so it's logical to begin there. Twice your $2,250 income would be $4,500—so, your next question is "what kind of a house can we get for $4,500, including house and lot?"

The savings and loan man explains that *exact* figures can't be arrived at until plans are submitted; but, he points out, the loan arrangement will be on the basis of a down payment and convenient, monthly instalments—in other words, you will be able to take advantage of the direct-reduction type of loan.

Now, perhaps, you produce a few clippings—pictures of houses which have attracted you. Here—it says in one of the clippings that the house pictured was built in Tennessee for only $3,600! But the savings and loan man explains that building costs vary from locality to locality, and that only an architect or builder can properly estimate what it will cost to build the house in your particular community.

He explains, too, that in order to help prospective builders with just such problems—and the many others which arise when the task of building a home is begun—his institution, like many other savings and loan associations, offers an architectural or technical service at moderate cost which can be included in the total construction loan. These services may include guidance in the selection of a design suitable to your building site and neighborhood, planning for your family's immediate and future needs, specification of materials and a check on those materials, and supervision of construction as your house goes up.

Technical Service with Frequent Inspections

Such services, of course, represent not only an advantage to the prospective home buyer in assuring good design and planning, but give the assurance that steps will be taken to check the workmanship as the house is built. Perhaps you're a skeptic as to whether you should have the protection of technical supervision. If so, the savings and loan man well might ask you these questions:

Do you know a poor cement mix when you see it? Do you know when wood is properly protected, and when it's exposed? Is your eagle eye sufficiently trained to detect improper joints, poor soldering,

defective wiring, small cracks, loose nails and poor grade lumber? What do you know about weather-proofing and termites? Can you spend enough time perched on the roof to see that the shingles are properly laid? And do you fully understand all the problems of good ventilation, proper room arrangement, and a hundred other little items of home-building?

If you don't understand these problems, and architectural service at a modest fee is available through the savings and loan association, your decision to take advantage of it will be a wise one.

Meanwhile, if you haven't already purchased your lot, you will probably try to select one close to a school, convenient to transportation and not far from a neighborhood shopping district.

The savings and loan man, because of his intimate knowledge of local real estate values, will be able to advise you as to whether the location is acceptable—that is, one in which homes are likely to retain their *residential* value for years to come without the encroachment of undesirable elements.

So—you decide to begin actual plans. A few consultations with the architect or technician result in a neat design—suited to both your site and neighborhood—with five rooms so arranged that a combination sunroom and bedroom may be added later. The architect checks local construction costs, estimates the cost of necessary materials, item by item, and shows you that the house can be built for $3,850.

Extra Safeguard for You!

Typical of a savings and loan transaction, these factors carefully have been considered: the family's credit; the location of the property; whether the house design is one which meets architectural standards; the fact that proper, durable materials are specified, and that your income is in proportion to the mortgage loan payments.

Then, with the architect's carefully prepared plans, specifications and estimated construction costs before him, the savings and loan official is able to submit to you an itemized loan plan with exact figures.

First, it is explained that a construction loan is made on the basis of the value of house and lot combined, plus such incidentals as recording and notarizing fees, title search, appraisal and examination costs, revenue stamps and initial service charges for handling the financing as construction progresses. So the figures look like this:

Lot	$ 500
Construction cost of house	3,850
Incidental costs	150
Total cost	$4,500

Now for the details of the loan plan—the savings and loan plan under which you will pay for your home. Of course, the size of the down payment required will differ in various communities, and so will the interest rates. However, the average institution will loan you as much as 80 per cent of the total cost, or $3,600, which, spread over 15 years with interest at 5 to 5½ per cent, for example, can be repaid in monthly payments of $28.47 to $29.42, including both principal and interest charges. Let's say that taxes on the property will be $8.25, and fire and windstorm insurance will come to $0.85. *Total* monthly payments, then, add up like this:

	5% Loan	*5½% Loan*
Interest and principal	$28.47	$29.42
Fire and windstorm insurance	.85	.85
Real estate taxes	8.25	8.25
Total monthly payments	$37.57	$38.52

Some friends of yours, you recall, bought their home—one of about the same cost in the same neighborhood—on monthly payments of considerably less, however, and you ask how such an arrangement may be worked out. It is explained that you, too, may use a loan plan calling for payments spread over as long a period as 25 years, but it is pointed out that the interest over a longer repayment period will amount to a great deal more than you would have to pay in 15 years. The savings and loan man shows you comparative tables of interest rates and repayment periods to illustrate. Something like this:

15 Year Plan (Principal $3,600)	*@ 5% interest*	*@ 5½% interest*
Monthly payment (principal & int.)	$ 28.47	$ 29.42
Int. for 15 yrs	1,524.60	1,695.60

25 Year Plan (Principal $3,600)	*@ 5% interest*
Monthly payment (principal & int.)	$ 21.05
Interest for 25 yrs	2,715.00

The differences in the respective interest charges are apparent. And the saving in the shorter, 15-year plan is something to think about seriously. Of course, if you cannot meet monthly payments sufficient to finance under the 15-year plan, you can't and that's all there is to it. You still can take advantage of the longer one and be paying for your own home on terms usually less than the rent you are paying. All the while, remember, you are increasing your equity in a home of your own, instead of collecting rent receipts.

Then You Actually Start Building!

As the day approaches when actual construction of your house begins, you will review the many advantages which are yours as a result of your first visit to the savings and loan association. You have decided on your house, the papers have been drawn and signed for the loan, and you have a right to feel that each successive step has been made intelligently and with assurance.

The advice you were able to get from the savings and loan association—a home-town institution, operated by your own townfolk—with respect to the location of your building site was based on its specialized knowledge of residential locations and values. The protective services afforded by the institution spared you expensive mistakes; provided you with a design that will not become obsolete, and specifications which conform to quality building standards. And, finally, you were provided supervision of construction to assure that your house would be a sound, workmanlike job.

That's how you may go about the great adventure of building your own home. Needless to say—you should "live happily ever after."

GET THIS *New* BOOKLET FREE

Valuable INFORMATION FOR PROSPECTIVE HOME BUILDERS

IF you want structural beauty and durability in your new home . . . build of wood! Listed below are some of the helps toward choosing and building a home that we will send you

FREE; JUST MAIL THE COUPON!

1. "WE ARE GOING TO BUILD OUR NEW HOME OF WOOD." Amply illustrated, it discusses home building from many angles . . . finance, construction, architectural style. Chockful of ideas for the far-sighted home builder.
2. Inexpensive building plans available. Send the coupon for a selection of attractive designs of small homes.
3. If you are planning to build in an area where subterranean termites are a problem, ask for information on TECO Termite Shields.
4. "LUMBER LITERATURE" — a catalogue of booklets on all kinds and uses of lumber.

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Mail THIS COUPON

Construction

The following pages give you the more important points of construction and building materials to study before you build your house. How to know good construction takes years of study and experience and we cannot attempt to make an expert of you in so limited a space. We do want you to know something about the various building materials and their proper uses as it should enable you to get more satisfaction and happiness out of your home.

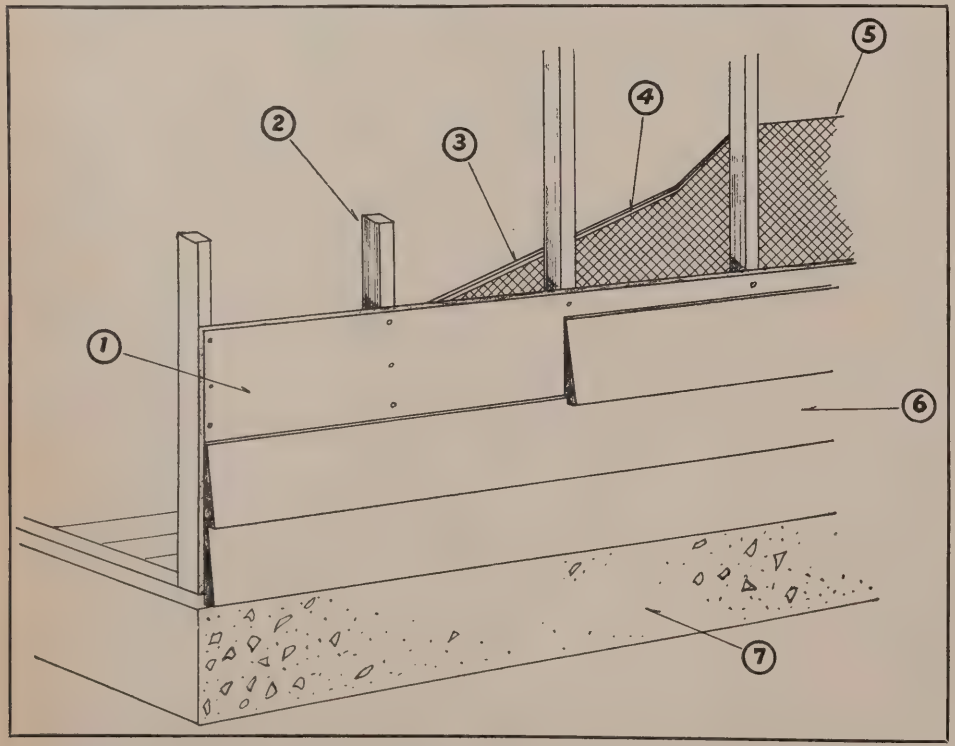
METHODS OF EXTERIOR WALL CONSTRUCTION

Successful Types, Including Lumber, Burned Clay Products and Concrete Masonry

HUNDREDS of thousands of new small homes will be built by and for our readers, particularly in the Defense Areas previously described. But after these homes have served their primary purpose (the housing of Defense Workers) they must possess the qualities which will insure them as good investments for the Future. Therefore, we present time-proven methods of exterior wall construction, economical in each type of lumber or masonry selected, and all representing long-lasting efficiency.

The more popular types (based on long and comprehensive experience) are presented here through illustrations and easily comprehended text. After you have made a selection you can get full details from your local lumber and building material dealer who perhaps has already supplied you with the necessary working drawings and specifications for the home you have selected to build. Such organizations can and will recommend contractors and it will pay you well to discuss these problems with such experienced men.

Remember that false first economies endanger an investment so important as that involved in building a new home. Your long-term financing will also depend on your original plans and specifications. The information presented herewith has been carefully gathered for you from many dependable sources. If some of the details are not thoroughly understandable, please write to the editor describing your particular problems. We will either tell you exactly where to get the information locally or try to render any helpful service which is within our power. Much of the descriptive material herewith presented applies also to modernizing where extensions and new exterior wall construction are involved.



A visual explanation of a simple and inexpensive method of frame construction for exterior walls. Wood lath (or metal lath) is used for the plaster base. This visual glossary indicates: 1. Sheathing; 2. Studding; 3. Finish plaster; 4. Rough plaster; 5. Metal lath; 6. Siding; 7. Foundation.

LUMBER AND PLYWOOD

THE wood frame house, when well built, provides beautiful walls which are warm, durable, and which can be achieved at relatively low cost. Lighter framing has replaced the heavy timbers of the Colonial days, but greater numbers of smaller members now produce walls of equal strength and stiffness at less cost. Exterior siding and shingles are available for numerous pleasing patterns. Modern siding comes to the builder thoroughly seasoned, carefully machined, and properly graded. The beauty of wood siding or shingles is that of simple lines and solid colors. Small shadows created by the lapped or moulded edges form a pattern of lines on the wall. The spacing and character of these lines, their direction, and the color the exterior is painted or stained are all factors which influence the effect. These points should be considered in relation to the size and proportion of the wall areas when deciding upon the pattern and width of the siding or shingles to be used. For example, very narrow siding loses much of its pleasing effect when applied to a large blank wall.

The height of a home may be emphasized by covering a part of the walls with wide vertical boards, perhaps using battens over the joints. Vertical corner boards break horizontal lines of the exterior and make the wall seem narrower, particularly if the corner boards and other trim are painted with a sharply contrasting color. A rustic appearance is easily obtained by turning the sawn side of wide bevel siding to the weather, or by using special patterns of rustic siding. Various types of siding may often be combined with shingles or shakes, brick or rough stonework to give interesting effects.

The ease with which wood sided walls can be altered or added to is well known. Spaces in frame walls are conveniently and readily accessible for the changes in electric light wiring, plumbing and heating systems, telephone and radio wiring, and other accessories of modern homes.

Plywood: Plywood for general use in home construction is made up of rotary veneer cuts glued with the grain running in opposite directions. This gives added strength to any panel that is constructed and natu-

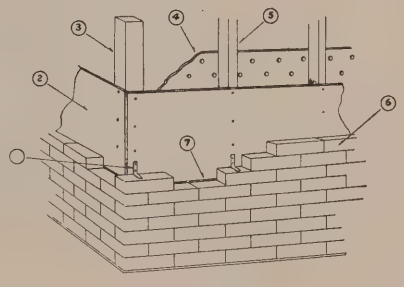
rally eliminates warping because stresses and strains are distributed in every direction. Plywood is rapidly coming into its use because of its labor-saving features on the job and its inherent strength. It comes in large panels in thicknesses which vary from ¼″ to ¾″ for use as sheathing and subflooring. Plywood is standard for all construction uses and is available from lumber dealers everywhere. The large sheets may be cut into any shape for fitting. For exteriors and exterior panel work, plywood may be painted or lacquered with surprisingly good results.

The thicker types of plywood, when used for exterior wall construction, carry much of the load of floors and roof and make possible the use of much less expensive framing. Ask your lumber dealer for full information on this method of exterior wall construction. He can also explain the logical use of plywood for interior wall finishes painted or hardwood panels and can get for you literature on this subject.

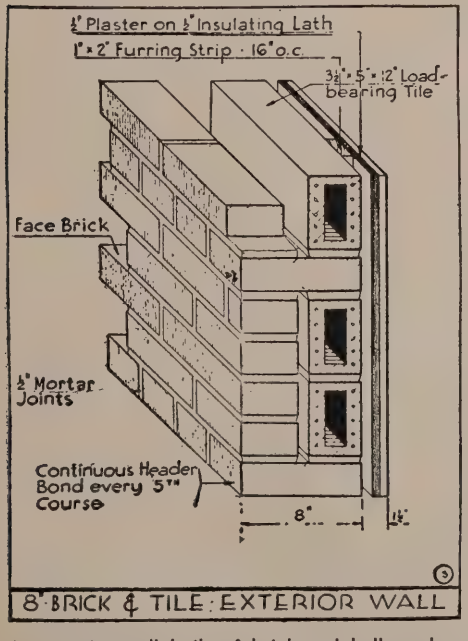
BRICK AND BURNED CLAY PRODUCTS

BURNED clay products as used for exterior wall construction, include brick (both structural and facing), hollow clay structural and finishing tile. There is a constantly increasing use of these products in small home construction because of their long-established qualities of both strength, fire-safety, and beauty. For foundations, the footings should be placed on soil which will support wall and foundation loads, which include most of the weight of the entire house. They should be of sufficient distance below grade to resist upheaval by freezing. Three feet six inches below grade is usually a safe distance. Brick is often successfully used for foundations. Hard-burned double-wall structural clay tile is also very satisfactory. The outside of foundation walls should be waterproofed by a coating of pitch or asphalt. Drain tile around the outside of the basement wall will carry away excess water.

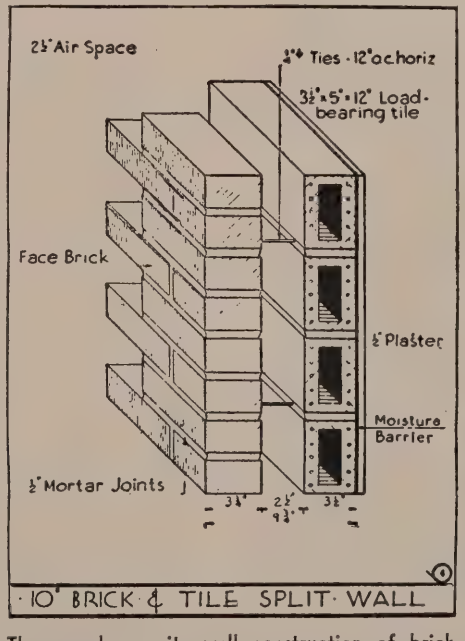
The illustration at the left below shows a wall built of a combination of burned clay products (brick and



Brick veneer as used for moderate-cost exterior walls. This visual glossary indicates: 1. Metal ties; 2. Sheathing; 3. Corner Bead; 4. Lath; 5. Studding; 6. Brick Veneer; 7. Airspace.

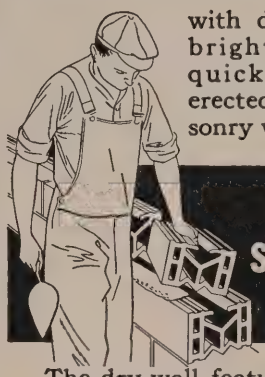

½" Plaster on ½" Insulating Lath
1" x 2" Furring Strip · 16" o.c.
3½" x 5" x 12" Load-bearing Tile
Face Brick
½" Mortar Joints
Continuous Header Bond every 5th Course
8"
8" BRICK & TILE EXTERIOR WALL

An exterior wall built of brick and hollow clay tile. It is bonded with brick. The plaster base is insulating wallboard nailed on furring strips.



The popular cavity wall construction of brick and hollow clay tile. Fill insulation can be used in the cavity as additional insulation if desired.

Make Your Home SAFE AGAINST FIRE



with dry, insulating, bright, attractive, quickly and easily erected, low cost masonry walls built with

NATCO STRUCTURAL CLAY TILE

The dry wall feature, the speed handle—these and other exclusive Natco advantages, make it possible for you to build an enduring, repair-free, all-tile home *—basement, walls, floors and roof—at moderate cost.*

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The Natco All-Tile Home, with basement, walls, floors and roof of hard-burned clay, is permanent—is adapted to any style of architectural treatment—is proof against the disintegrating influences of weather and time. It is free from future painting or repairs—is erected quickly and at low cost.

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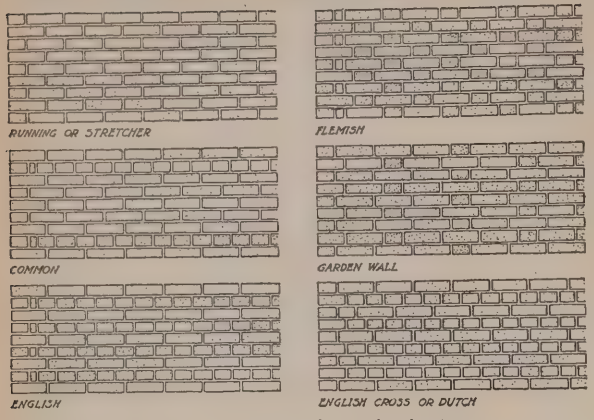
METHODS OF EXTERIOR WALL CONSTRUCTION . . .



Six types of wall bond. These form the basis of many adaptations with which a skilled designer can give unusual character and interest to all types of burned clay masonry walls.

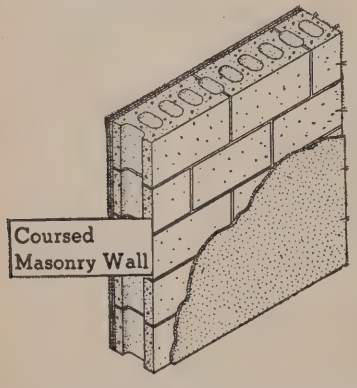
structural tile). At the right is an exterior wall of face tile construction. Insulating wallboard can be used as a plaster base in either case. Exterior walls also are often built of brick alone, using structural brick for the entire construction with exteriors faced with selected grades of the same material. Brick veneer construction as shown on the preceding page is popular when the beauties of brick exteriors must be combined with economy.

To develop fully the values of burned clay construction, brick or tile should be carefully laid. Poor workmanship may produce a leaky wall. The burned clay units should be fully imbedded in cement-lime mortar. If properly laid, units of brick and hollow tile, used singly or in combination, will produce a durable weather-resisting structure.

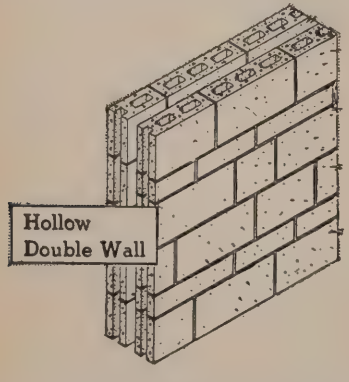
The appearance of the exterior walls of a house is important and the appearance of a burned clay wall is much influenced by the bond employed. "Bond" really means the method of binding burned clay products into an overlapping succession of units to form a strong wall.

CONCRETE MASONRY

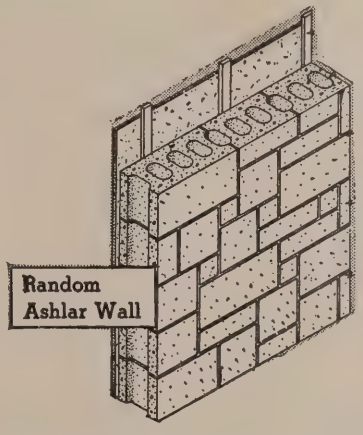
SEVERAL types of concrete masonry exterior walls are illustrated herewith. There are two types of construction (concrete blocks and poured concrete). Following are descriptions and illustrations of the most popular types of concrete masonry walls:



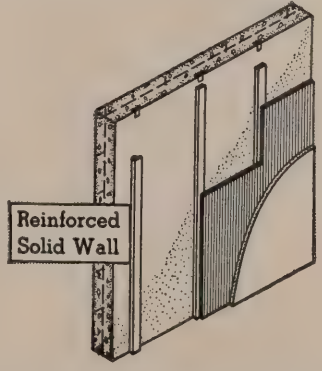
Concrete Masonry—Coursed. Here the insulation is furred out from the inside face to make familiar plaster walls suitable for painting. The exterior may be overcoated with portland cement stucco or given a finish of portland cement paint in a choice of colors.



Hollow Double Wall. By applying insulating materials in the hollow sections between concrete masonry walls, both the exterior and interior surfaces may be exposed, eliminating the need for plaster on the interior.

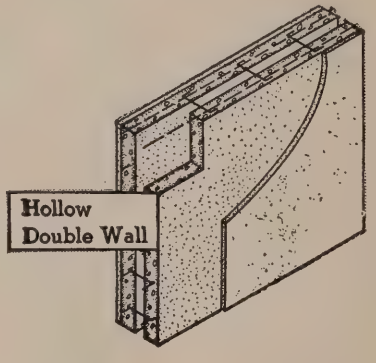


Random Ashlar: Through the use of several sizes of concrete masonry units, charming patterns may be designed for the exterior walls. Here it is desirable to apply insulation on the inside surface for plaster finish. The exterior is given added interest by the use of different colored masonry units, or by the use of colored portland cement paint.



Reinforced Concrete—Solid. Reinforced concrete construction—rigid, monolithic walls and floors—presents a somewhat different group of wall types. The solid wall, of the proper thickness, is built up in forms made of metal or wood. The exterior surface, generally smooth, becomes the finished wall surface after application of cement paint. Insulation is applied to the interior and becomes the base for plaster finish.

Hollow Double Wall. The reinforced concrete hollow double wall provides an insulating air space. This wall may be further insulated by filling the space with suitable materials. If the interior wall is molded against smooth or patterned form liners, it will require no plastering or other treatment, aside from painting, to provide beautiful, interesting walls.



Ribbed Wall. In the ribbed type of concrete wall construction, the rigid insulation is applied to the face of the ribs as a plaster base, with suitable insulating materials filling the hollow sections.

. . . ROOFS

YOUR roof should enhance the architectural style of your home in shape as well as material. There are four types of roofs: (1) flat; (2) gable—two sides running up to a ridge, leaving gable ends; (3) hip—a roof in which all four sides come to a peak or ridge, with skylights or dormers necessary for light; (4) gambrel—the result of a desire to enlarge the attic headroom by bending out the slopes of a gable roof. The principal types of shingles are wood, asphalt, composition, asbestos, and tile. Other types include slate; metal roofings of tin or zinc, or copper in sheet or shingle form, and rolled or strip composition roofing.

New Red Cedar shingles are being applied right over the old roof. Asphalt or asbestos-cement shingles may also be similarly applied. Strength and heat resistance are thus increased and there is a considerable saving in labor.

Wood Shingles

Wood shingles hold a prominent place in preference and use because they combine beauty, low cost and long life. Eight-five percent of the wood shingles are made of Western Red Cedar, Southern Cypress, California Redwood and Eastern White Cedar. Red Cedar has a straight, even grain (be sure you select them with the grain vertical and straight); splits easily and has an oil peculiar to this wood alone that renders it immune from ravages of fungi and insects. Wood shingles are attainable in various standard dimensions, including random widths. They come in natural colors which will weather to soft tones, or they may be had prestained in colors such as brown, red, green, etc.

The beautiful appearance of sidewalls when wood shingles are given a very wide exposure, plus deep shadow lines, offers such an appeal to people of artistic temperament that there has been a widespread increase in the popularity of *double-coursed* shingle roofs.

In double-coursing, two layers of shingles are applied upon each course, and the course exposure greatly increased with better shadow-lines. Amazing economy is obtained through the use of No. 1 grade shingles for the outer course and No. 2 or No. 3 shingles for the under course. The butt lines of the exposed Grade 1 shingles, project approximately ½ inch below the butts of the shingles in the concealed course. It becomes an easy matter to lay shingles in this manner by using a strip of rabbeted lumber, such as a length of shiplap, as a straight-edge for lining up the shingle butts.

Stained shingles can be applied in double-coursing for the outer course, with the concealed inner course of unstained stock.

This method of application permits the use of 16-inch shingles exposed 12 inches to the weather, 18-inch shingles 14 inches, and 24-inch shingles 16 inches. The shingles are butt-nailed, with two rust-resistant 5-penny small-headed nails being used in each shingle. They should be driven three-fourths of an inch from each edge, approximately two inches above butt line.

Asphalt Mineral-Surfaced Shingles

The average asphalt shingle has a top layer of mineral surface, then waterproof asphalt, waterproof felt, and waterproof asphalt. One new one on the market has a cork layer underneath which provides a considerable degree of insulation for the roof. Asphalt shingles can be had in a wide variety of colors, patterns

This attractive home has hand-split wood shakes for the roof and stained shingles for the sidewalls. The roof has unstained shingles that time colors into a nice brown. The sidewalls are stained grey.

Asphalt shingles are being applied over old wood shingle roof. There are definite advantages and savings by doing it this way rather than tearing off the old roof.

and textures. Standard colors are available to blend properly with any type of exterior facing material. Color combinations can be quite attractive, but often it is advisable to stick to solid colors.

Asbestos Shingles

Asbestos shingles are more fire-resistant and offer longer life, but cost more than any of the composition group. They are made of asbestos rock-fiber and either Portland cement or asphalt compressed under hydraulic pressure. There is a wide variety of rolled and strip roofing in the composition group.

Tiles

Burned clay shingles, often known as clay tile, come in flat shapes or in special shapes moulded to give a pleasing texture. They are particularly adaptable to the Spanish type of architecture. The flat clay shingles are for any type of home.

Slate

There are two types of slate shingles. The more expensive of these is known as *random* slate and comes in varying thickness. Such shingles are usually laid in cement mortar and used mostly for more expensive homes. The *commercial* slate shingles are thin slates which are comparatively inexpensive and are laid in patterns like wood shingles. The shingles have nail holes predrilled and may be expected to give lifetime service. Available in colors and

MIAMI BATHROOM CABINETS AND ACCESSORIES

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CAREY CORK-INSULATED SHINGLES

THE asphalt shingle that gives long-wearing roof and roof insulation, both for roof cost only.

CAREYSTONE SIDING AND SHINGLES

Made of asbestos and cement. Fire resistant; durable as stone. Minimize upkeep expense.

CERAMO ROOFING SHINGLES (Asbestos-Cement)

Beautiful colors — will not fade — they are in the ceramic coating which is fused on at high temperatures. Weather resistant and fireproof.

CAREY ROCK WOOL INSULATION

Available in loose wool, granulated, felted batts, and sealed roll blankets. Reduces room temperatures in summer; cuts fuel consumption in winter; pays for itself. Adds to fire safety.

Keep your HOME COSTS down!

BUILD OR MODERNIZE WITH Carey LOW-UPKEEP PRODUCTS

• The cost of a new or modernized home goes deeper than the first cost of the improvement. Repairs, painting, fire hazards, fuel bills, are costs that come year after year and will be low or high, according to the judgment you use in selecting materials.

The yearly savings, effected by the use of CAREY Products, will go a long way in helping pay for your improvement. CAREY Rock Wool Insulation, for instance, reduces fuel consumption up to 30%, actually repays its entire cost in savings. CAREY Roofing, Shingles and Siding are fireproof and rot-proof and minimize maintenance expense. All CAREY Products save you money in longer service and lower upkeep.

Hold your present and future home costs down by using CAREY materials. They are reasonable in cost and save you money—year after year. Let the CAREY Dealer help you solve your building problems. Mail coupon NOW.

If you are interested in building a new home or remodeling your present quarters, you will find information of value in CAREY literature. Ask your CAREY Dealer for these booklets, or mail this coupon today.

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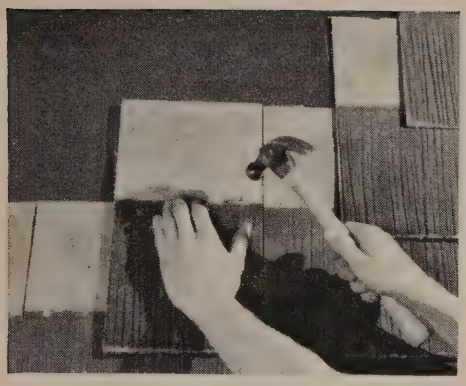


Asbestos-cement shingles are usually laid on a foundation of tar paper or asphalt saturated felt, increasing the waterproofing qualities of the roof. They come in various colors and patterns.

the usual soft slate tones.

Other Types

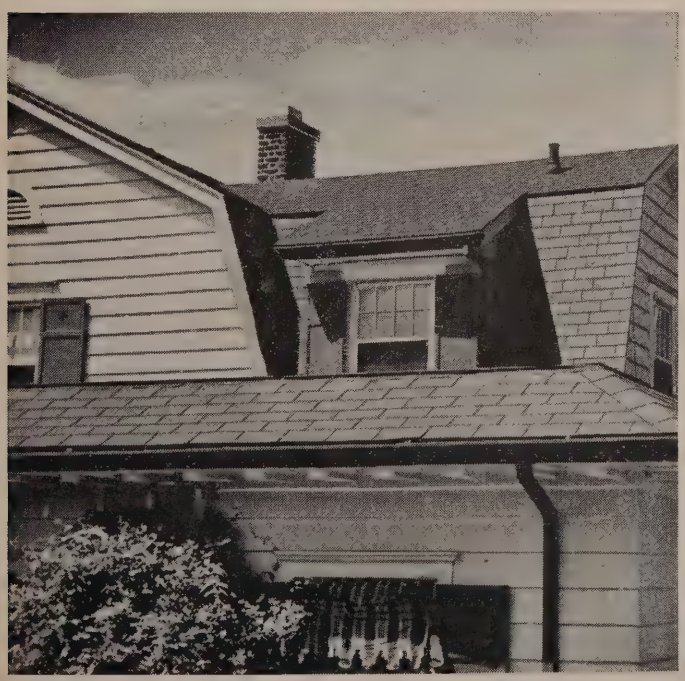
Metal roofs of tin, copper or zinc are used more on public buildings than on homes. Built-up roofing is used only where flat roofs are indicated, and particularly where walking on the roof is desirable. It calls for a special installation of layers of felt impregnated with tar or asphalt, and its installation is the work of a special type of licensed roofer.

Remodeling

Houses are reroofed to preserve the house or to provide beauty and smartness. Homeowners facing the problem of giving old homes the illusion of newness, are resorting to color. Durable but dull greys, browns and buffs that once were popular colors for exteriors of most American homes, are now being discarded for more stylish but equally durable colors. These, appropriately laid out, are serving to bring out the best features of old houses and to camouflage the less appealing features. For houses that look too high there are colors that will help to produce the desired optical correction. Mahogany or blue-black will prove excellent in this connection. If your house is white, and more than half of the houses in America are white, a blue roof will serve to make it look whiter through the operation of the law of color called simultaneous contrast.

In applying a new roof, it is wasteful and unnecessary practice to strip off the old shingles. These should be left in place, and covered with the new shingles. The result is double insulation against heat transmission, with a consequent saving of fuel during cold weather. This saving often reaches such proportions that in a few years the price of the new roof has been absorbed. Moreover, the double roof that results is considerably stronger than the old single roof, so that a heavier snow load can be carried.

Over-roofing is simple and easy. The first and second steps consist in cutting off the old shingles at the eaves just below the butts of the second course, and removing these. This can be done with a hatchet or saw. The space left in this manner is filled in by 1x2 or 1x4 inch strip, which is nailed flush with the eave line.



Asphalt shingles are widely used because they offer the home owner low first cost, fire retardance, a wide choice of patterns, and a fascinating selection of colors and color combinations.

This roof is made of commercial slate shingles which are thin and comparatively inexpensive. They give lifetime service.

The third and fourth steps in over-roofing consists in cutting back the shingles from the edges of the gable cornices for a distance of 2 or 3 inches, and in replacing the shingles thus removed with a 1x2-inch or 1x3-inch strip extending flush with the gable so that the new shingles will have a strong base where they overhang the gable cornice, and so that the edges of the old shingles will not be visible. As an alternative method, the edges of the old shingles may be sawed off flush with the gable edge, a suitable narrow strip being nailed to the verge rafter or facing so that a level surface is provided beyond which the new shingles project.

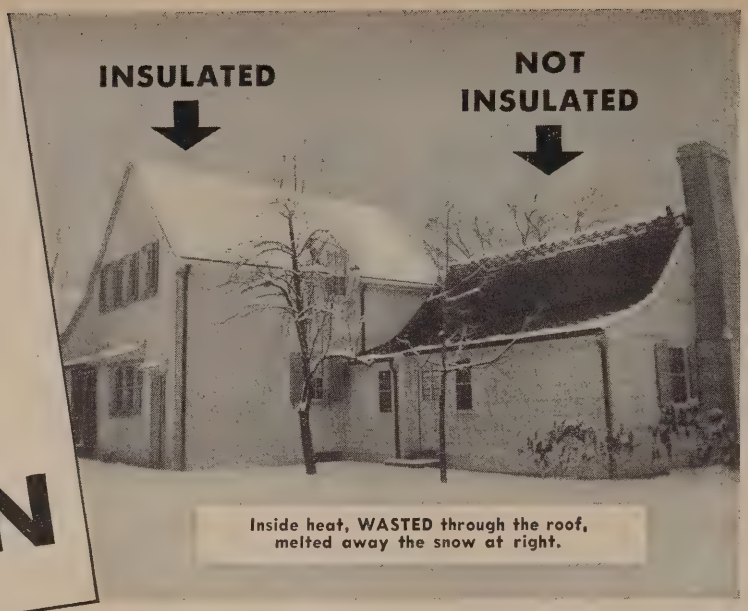
The fifth step consists in placing a strip of lumber in the old valley, partially filling it, and attaching it with several nails. New valley flashings are next placed in position and the actual over-roofing may be started, the old hips being removed as the shingling progresses.

The sixth step consists in removing the old combs or ridges and nailing a strip of bevel siding, the thin edge down, along the side of the ridge. This provides a solid surface.

Good Brand Names Insure Quality

There are many poor (cheap) roofings. Buy only the products of manufacturers with a good record and dependable guarantees. A quality roof is a good investment as it is economical to maintain and has long life. The ideal roof is durable, economical throughout the years, a safeguard to the house and a fit crown for your attractive home. Make sure yours is a *good* roof!

MINERAL WOOL *Full-Thick* INSULATION



Inside heat, WASTED through the roof, melted away the snow at right.

The right choice for **FUEL ECONOMY • FIRE SAFETY • HEALTH *and* COMFORT • EASE OF INSTALLATION • PERMANENCE!**

FUEL-SAVINGS achieved by mineral wool insulation repay the entire cost of insulation within a few years. Each ton of mineral wool used in full-thick insulation of coal-heated homes saves from 2½ to 3½ times its own weight in fuel every winter.

U. S. Government research engineers on the T.V.A. project found heat losses from uninsulated homes ranging from ⅓ to ½ of the fuel consumed, as compared with mineral wool insulated homes.

On Long Island two duplicate houses, side by side, are occupied by a mother and her daughter. One is uninsulated. The other has mineral wool in the walls and beneath the roof. It costs an average of $4.40 *more per month* to heat the uninsulated house than its next-door twin—or *MORE THAN ENOUGH TO COVER ONE MONTHLY PAYMENT ON THE MORTGAGE EACH YEAR.*

Fuel-saving, however, is only a part of the story. Mineral wool insulated houses are healthier, safer and more readily saleable.

HEALTH AND COMFORT

Family health is improved, and fewer days lost from work and school in winter, because families living in homes with warm walls suffer less from drafts and common colds. In summer the sun's heat is kept out and the house made a more comfortable place in which to live and sleep.

FIRE SAFETY

Furthermore, mineral wool insulation, being produced at extremely high temperatures, is fire-resistant and often spells the difference between a small blaze held to one room and complete loss of a home. Full-thick mineral wool in wood-lath partition, as demonstrated in tests by the National Bureau of Standards, stops the passage of fire for one hour. This makes it possible for fire-fighting apparatus to arrive in time from distant points or else enables "amateur" fire-fighters to dispose of the fire without outside help. Because of this greater fire-safety, plus the saleability and rentability of mineral wool insulated homes, many mortgage banks insist on mineral wool insulation in all homes which they finance.

NO DEPRECIATION

Once installed, mineral wool insulation undergoes no depreciation, requires no service or upkeep. When a manufacturing plant in La Crosse, Wisconsin, was torn down in 1937, mineral wool installed in 1900 was salvaged and used again in a building under construction in the vicinity. 37 years of use hadn't been able to affect its efficiency.

OLD HOUSES CAN BE INSULATED

Though the natural time to insulate a house is during construction, more than 1,000,000 houses, after completion and occupancy, have been brought up to modern standards of comfort, fuel-economy and fire-safety through the pneumatic process. Even old houses can be insulated in this manner, the mineral wool being blown into the walls under air-pump pressure from outside the house, through temporary openings in the exterior walls, without inconvenience to the household and without disturbing the furnishings of the house.

USE THE COUPON TO GET AUTHORITATIVE ADVICE FROM UNCLE SAM

The Department of the Interior considers residential insulation so important that its Bureau of Mines offers a 16-page bulletin on the subject, Information Circular 7166, entitled "Home Insulation—An Effective Conservation and Defense Measure." It covers the why and how of insulation in complete detail, giving detailed "pocketbook data" on its value as well as explaining its major importance in saving fuel for army, navy and defense production. You can secure a copy, free, by writing the Bureau of Mines at Washington, D. C.

USE THIS COUPON

NATIONAL MINERAL WOOL ASSOCIATION
Dept. SH, 1270 Sixth Avenue, New York, N. Y.

I would like a free reprint of "HOME INSULATION, An Effective Conservation and Home Defense Measure," Information Circular 7166, which was originally published by the United States Department of the Interior, Bureau of Mines.

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NATIONAL MINERAL WOOL ASSOCIATION
1270 SIXTH AVENUE NEW YORK, N. Y.

MINERAL WOOL HELPS PAY OFF THE MORTGAGE!

INSULATION

A Defense Recommendation for Fuel Saving—Now and in the Future

NO less an authority than the U. S. Department of the Interior has referred to home insulation as an effective national defense measure. It means just as much to the individual, busy with his own small affairs and trying to insure the comfort of his home during the severe winter season. Insulation is one of the first steps to be taken by both the nation and the individual in conserving the fuel resources of the country! The manufacturers of insulating materials have developed their products to the point where there is a type of insulation available for every size and kind of dwelling. To omit it from a new house, or fail to use it in modernizing an existing one, is simply an indication of gross ignorance of its value. Insulation is one item of the many which got into the making of a house that actually not only pays for itself, but continues to pay dividends during the life of the structure.

The National Bureau of Standards has estimated that an average frame house can be heated with 40% less fuel when it has insulated walls and roof. When storm sash and weatherstripping are added, the savings run as high as 60%. This means that if your fuel bill amounts to $100 a year, it could be $60 if your house is insulated! If your insulation costs you $120 to install, you would pay for it out of savings in three years and receive dividends in the form of savings as long as you own the building. When you come to *sell* it—an insulated home *always brings a higher price!* Rather than being a luxury, insulation is actually a *profitable economy!*

Available Types of Insulation

There are several different kinds of insulation, all effective, and several methods of installing it. Various materials are used, and in the past year or so, there have been new insulating materials developed. Minerals, fabrics, metals, and even organic materials have been called into use and developed in the search for more efficient results.

As most of the heat losses in a house are through the roof, it might be well to start at that point. A great many homes have what is generally called an open or unfinished attic. The beams that support the roof are readily seen as well as the sheathing or shingles that cover the surface. As a rule the thickness of this covering never approximates the thickness of a wall, and in some types of material, there are thousands of small openings that will exclude rain or snow, but which will permit the escape of heat. As a result, the heat (or penetration of cold or heat) loss through the roof is large. One of the most popular methods of insulating such an attic is with structural insulating board. This is nailed directly to the roof beams and rafters and to the studs of the side-walls. It provides a very good insulation, and wall and ceiling finish for attic rooms as well. It can be painted.

Another method of insulating an attic is with batts. These are complete units which can be packed into the space between the studs and beams. They furnish a heavy and dense insulating coat.

A third type of insulation is the "blanket" composed of strips of waterproof paper covering a fibre or wool filler. They come in various widths and lengths, and are easily handled and applied by nailing in position.

A new development that is very highly spoken of is a rubber liquid containing fibres said to have great insulating value. This is sprayed on the walls and underside of the roof, coating them with a seamless, moisture-proof film that presents a protective covering. This method has the advantage of requiring no fitting and cutting.

Even cotton has been brought into

Flexible insulation is used here in the attic. It is often known as blanket or quilt insulation. It is made from mineral wool, wood fibre, or animal hair which are fire-, moisture-, and vermin-resistant.

For houses already built this "blown in" type of rock wool insulation is efficient both in the attic and sidewalls between the studding. It is easily installed by an experienced workman.

Here the "blown in" type of rock wool insulation is being put in the sidewalls of a brick veneer house.

service. There has been invented a cotton product which is attached to both sides of plywood sheets. It has a high value as an insulator. It is fire-resistant and vermin proof. It lends itself readily to decorating, and will probably rank high among new building products.

Any one of these products can be used to good advantage, and with the confidence that it will pay for itself in savings of fuel, and increased comfort and value of the house.

The insulating of walls presents more of a problem than does that of the roof. Of course it is easy if done when the building is under construction. When plastering or wall-finish is completed on the interior, it cannot be readily disturbed. To overcome this there are several *fill* insulations that can be poured or blown into the walls through holes cut in the exterior, by removing a shingle or section of the siding. These can be replaced after the wall has been filled, and the surface looks exactly as it did before the wall or roof was insulated.

Cellar ceilings can be insulated to good advantage, and the process is extremely simple, because the underside of the floor joists is exposed and ready to nail to.

* * * * * * *

The story and value of insulation is well demonstrated by old-fashioned ice-houses, where ice was stored after it had been cut off a lake in the winter-time. The walls and the ice were packed with saw-dust. This kept the heat of the summer from penetrating through the walls and melting the ice. In like manner it kept the cold temperature in. To-day of course more efficient mediums than saw-dust are used in ice storage plants as well as in homes but the idea itself is the same.

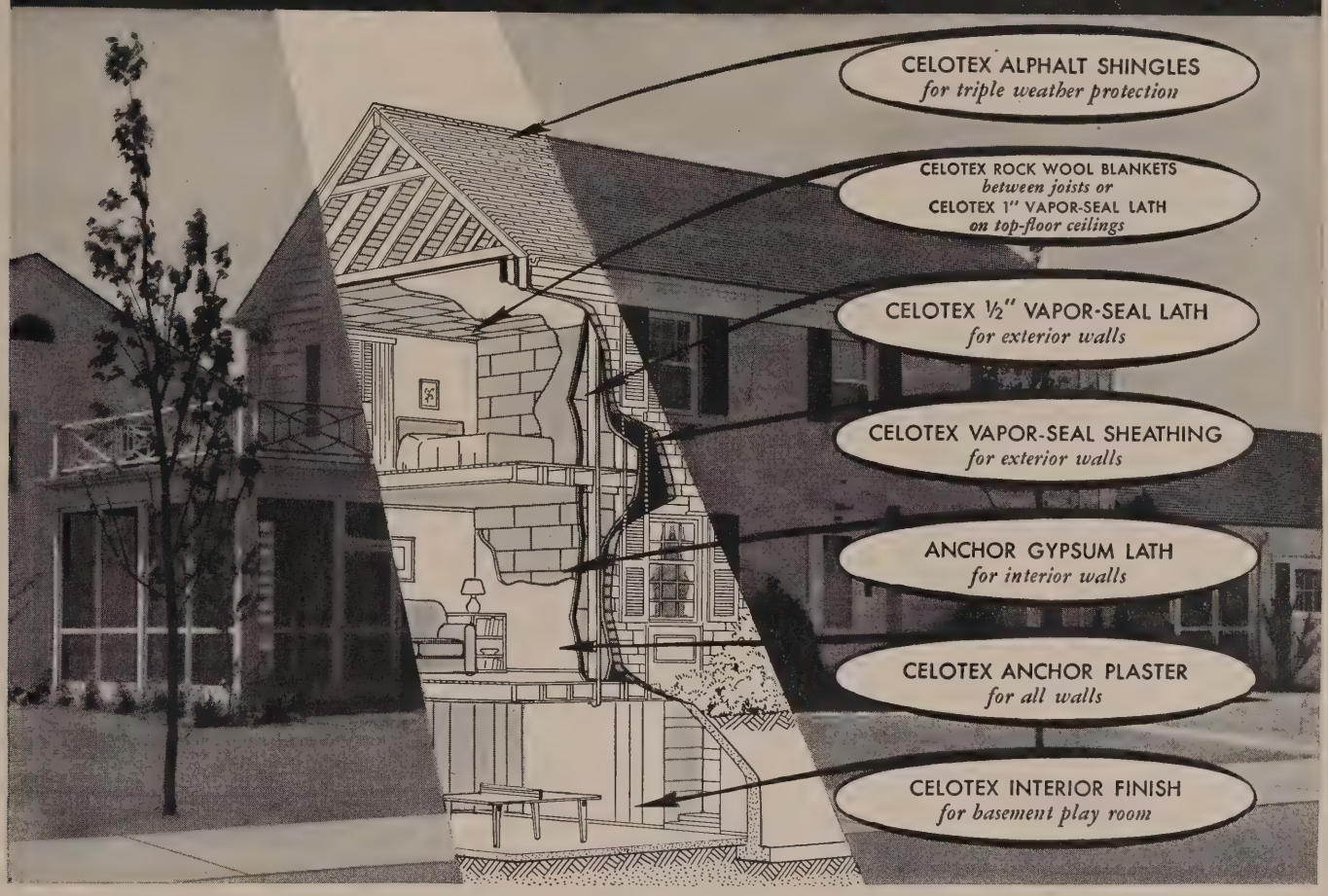
Another good example is the fact that we cook in ovens. We do this because the oven is tightly enclosed, and practically no heat can escape from it. We save fuel. If the oven is very poorly insulated, and the door loose on its hinges, it requires twice as much fuel to keep it at cooking temperature than though it were tight. This applies to your house as well. If it is tight and well-insulated it can be heated with a minimum of fuel, and your heating plant is not overloaded trying to keep the house comfortable!

Habit is a hard thing to overcome, and we have been so used to the fact that fuel was plentiful and reasonably cheap, that we have developed a nation-wide habit of extravagance in heating procedure. We all know that the average person's first thought on feeling chilly, is to open up the furnace full blast, or push the thermostat up so that the automatic burner will click into operation. Thought is too seldom given to preventing the loss of heat, but generally to making more of it. Now that conservation is the order of the day, it would be best to change our habits, and to look into the means at hand wherewith to save our fuel. Insulating is the first and most important step that we can take for this purpose.

You Insulate for a Double Purpose!

Insulation has another function besides that of keeping the heat we pay for inside our home. In summer time it prevents the outdoor heat from making the interior unbearable. It blocks the high temperature from the sun on roof and walls, and enables us to enjoy a

Guard Your Investment
IN THAT HOME YOU ARE BUILDING!



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Backed by the Quality Reputation of the Celotex Name!

IT'S just plain good business to plan your new home with regard to resale possibilities. Good business for you—good business for your financing agency! And there is no better way *to "insure" high resale value* than by using famous, nationally advertised Celotex Building Products, as recommended by leading dealers and contractors everywhere.

All these Celotex Building Products live up to the supreme quality reputation established by Celotex Cane Fibre Insulation *over a long period of years.* Celotex Asphalt Roofing Products represent the peak of dollar value in fine appearance and lasting weather resistance.

There is a Celotex Rock Wool Product for every requirement—*all fireproof, all vaporproofed*—all meeting the most rigid requirements for efficient, economical non-structural insulation. And in Celotex Anchor Plasters, Anchor Gypsum Lath, and the new Anchor Clip System, you have the modern answer to every plastered wall demand!

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The One BEST Building Paper

SISALKRAFT under floors and in the walls of this home costs only $15.00 — only a few dollars more than light, flimsy building paper!

Here's What It Gives You:

Tough, waterproof SISALKRAFT seals the walls and floors of your new home against the passage of moisture, drafts and dust — *for the life of the building.* It assures greater comfort—lower upkeep, a building that stays "younger" longer.

There is no other building paper like SISALKRAFT — reenforced with miles of tough sisal fibres — sealed with special asphalt — covered with clean, strong kraft paper.

PAPER IS *Important!*

Good building paper costs *less* and does *more* than anything else that goes into a new home. And remember—it is put in but ONCE, when the house is built. Building paper that fails, can never be replaced. When the difference in cost is so small—can you afford to take a chance with anything but the BEST building paper? Ask that your builder use SISALKRAFT! He knows its extra quality.

The SISALKRAFT Co.
205 SM W. Wacker Dr.
Chicago, Illinois

SEND FOR SAMPLES and interesting literature. FREE . . . mail the coupon.

The SISALKRAFT Co.
205 SM W. Wacker Drive, Chicago, Ill.

Send me, without obligation, an actual sample of SISALKRAFT, and building literature.

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Address.....

City.....State.....

INSULATION . . .

reasonably cool house. It can perform these directly opposite functions because it prevents the transfer of heat energy. A good material will continue to furnish this service year after year without expense or attention.

The layman is naturally puzzled as to which material provides the best insulating value. He hears the claims of all of the manufacturers (most of them supported by authority of some kind) and wonders which he should select. He talks to people and gets their experience with this or that material. Of course he is in a quandary! The answer is that practically all of the insulating materials on the market have a definite value, otherwise the firm that makes them would find them unsalable after a season or two. It is hard for him to go wrong in his selection if he confines his choice to the well-known brands!

* * * * * * *

In colder climates the use of storm-sash deserves recommendation wherever insulation is under discussion. Everyone knows the feel of a window at night when the thermometer is low. The air in a room is constantly circulating, passing over this chilly surface and becoming cold. More fuel is needed to reheat it. Storm-sash prevents direct contact with the outside cold, furnishes a cushion of dead air between itself and the window pane, and helps maintain an even temperature in the room. Insulation has been referred to as the overcoat for the house. *Storm-sash are the mufflers that close up the openings!*

Many families feel that they are not in a position to insulate their homes, and prefer, (or think it wiser,) to pay a small amount each month for additional fuel, than to burden themselves with the expense involved. They are quite wrong in their reckoning! Any local lumber dealer is in a position to show them how their insulating can be financed by monthly payments that would probably not exceed the amount they were paying for the extra fuel! The sensible thing to do is to inquire about it, and assure yourself that you can buy your insulation job for the approximate money you are throwing away on extra fuel. It is also quite probable that fuel may be rationed, and houses allowed only so much per cubic foot. In that case the uninsulated house will fare badly under the new scheme of things; for the rationing will be done on a basis that will take it for granted that the houses are economical to heat rather than extravagant!

KEEPS YOUR ATTIC *Cool in Summer Dry in Winter*

Aspirator Type Roof Ventilators are on The Defense Housing Critical List

LESLIE (Aspirator Type) Louvers have made it possible to ventilate all types of attics. Properly placed in roof or gables, these louvers induce movement of air into and out of attics. Nature provides the power. They exhaust latent heat in summer, keeping the entire house, and especially the rooms directly below cooler; they exhaust excessive humidity (the cause of most serious insulating problems in winter).

LESLIE SLANT ROOF LOUVERS (Aspirator Type) These patented louvers are easily installed in any new or old hip roofs, regardless of pitch or type of roofing. They let air in, but have internal baffle to provide all-weather protection, even against driving rain and snow, and are screened against insects, birds and rodents. Wide flashings, special lips and other construction features provide easy, weather-tight installation. (Cost installed but a few dollars . . . work continuously for life of building.)

LESLIE WALL LOUVERS (Aspirator Type) Come in all sizes with flush or inset flashings. Patent pending box-wall type has self-cleaning corners and drip to exclude water. Other "engineered" features make it best policy always to specify LESLIE Louvers, for general use or in matched openings that balance with LESLIE Slant Roof Louvers to create attic aspirator (breathing) ventilating system.

Write for Circular and Prices

LESLIE WELDING CO.
2947 N. Carroll Ave., Chicago, Ill.

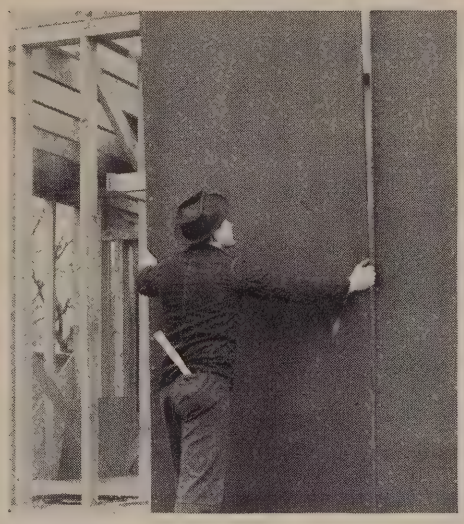
INSTALLING STORM SASH

For a home to be properly insulated storm windows are now considered essential. In a few years they more than save their cost on the fuel bill.

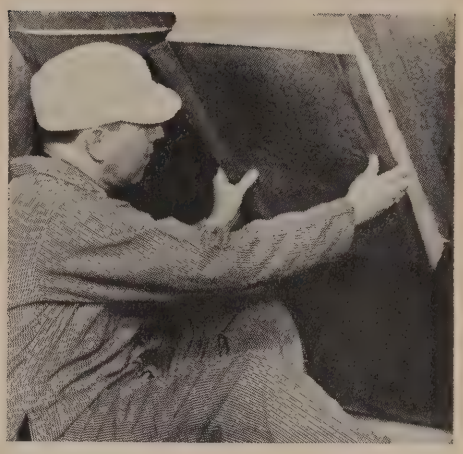
Adequate Insulation of Homes Is a Defense Measure—and for the Future!

Vital Points for Insulation	*Types of Insulation*
1. Under roof or attic floor	1. Structural insulating board.
2. In the walls	2. Insulating batts
3. At the windows	3. Fill insulation
4. Cellar ceiling	4. Blanket insulation
5. Doorways	5. Reflective metal

Beautiful interior walls and ceilings are provided by the many colors and textures of the insulation board shown here. It has both insulating and acoustical properties.



Structural insulation board that has been asphalt coated is one of the most popular types as it performs the double function of sheathing and insulation.



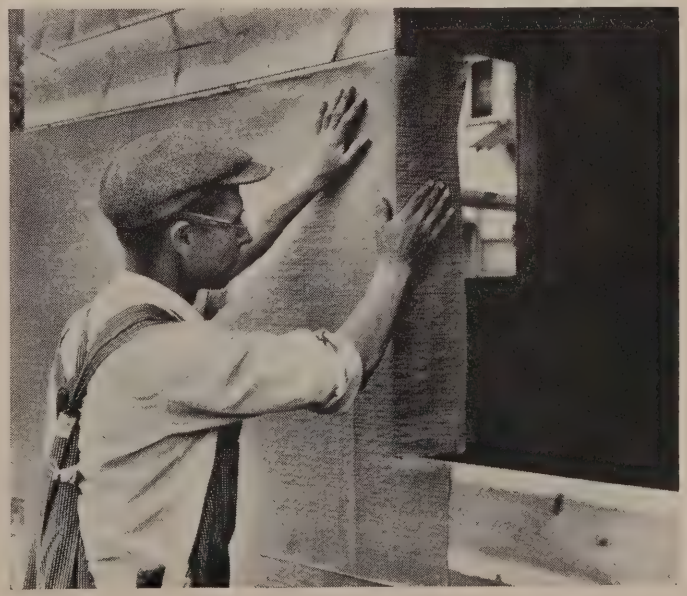
Rock wool batts of wall thickness are another development of research engineers that bring comfort the year around for the small home owner.

It would not be unexpected, if insulation were one of the building materials for which priority would not be required. The Federal Government has gone to such lengths to encourage its use as a fuel conservation measure, that any other condition would be contradictory; and it will probably be readily obtainable.

Some of the figures that are Government-estimated, are staggering in their proportions. There are about 37,000,000 dwellings in the country. About 500,000 will be added within a year. The average American home consumes five tons of coal a year, or else its equivalent in other types of fuel (this includes of course, homes in the south where little or no heating is required.) The estimated difference in cost between heating the uninsulated house, and the one that is insulated, is set at a minimum of twenty-five dollars a year! The answer runs into many millions; every dollar of which could be saved, and directed into the savings accounts of the owners!

It has often been pointed out that the individual would do well to follow the example of the large corporations in the conduct of his affairs. In regard to the use of fuel, and the conservation of heat, the large manufacturers will go to any length to be economical. They insulate everything that should be insulated, because they know that they are saving money by doing so. Unless your money means less to you than theirs does, follow their example, and insulate your house.

A final word might be said about the doors of a house, while on the subject of complete and adequate insulation. We all know that each time a door is opened, we feel the draft which means that several cubic feet of well-heated air has blown out of the house, and has been replaced with a like amount of cold air. This is an extravagance that can be eliminated once and for all, by the installation of storm doors. Many practical-minded homeowners have built their own storm vestibules in a manner which permits of their being hooked together quickly, and taken down in the Spring with equal ease. The amount of comfort, and economy of heating that they offer makes them well worth while.



Good quality sheathing paper is a good investment as it keeps drafts and leakage out of the house and from occurring around window and door openings.

WHAT'S YOUR PROBLEM

(Continued from page 213)

Q. Elizabeth, N. J. We cannot get the kind of heating plant we want for our house now. Can we use a space heater now and make a loan later to purchase the central heating plant we want permanently?

A. If the space heater should be acceptable for FHA insurance on the house it would be on a reduced valuation basis. In case of insurance on a reduced basis, a reconsideration would be possible for a higher amount, when the proper heating plant has been installed.

☆ ☆ ☆

Q. Albert Lea, Minn. We are in the process of building a home and wonder if we will be able to get metal for weatherstripping?

A. According to OPM the only type of metal weatherstripping comes on a prefabricated window unit of the spring balance type. This type of window comes weatherstripped on the sides. For weatherstripping the top and bottom of the window we suggest the use of the cheaper felt strip as a temporary measure until after the emergency when copper will become available again.

Q. Decatur, Ill. I wish to remodel an old house and buy some new heating and laundry equipment. I have part of the necessary money. Where can I get plans and specifications and borrow the balance on easy payments?

A. We suggest you apply to your local lumber dealer who will recommend one or more good modernizing contractors. Take the estimate you select to a local lending institution and apply for a monthly repayment type loan for the difference between the estimate and the amount you want to pay cash. The FHA Repair for Defense Program encourages this type of construction. For further details on financing see Financing Section beginning on page 233.

☆ ☆ ☆

Q. Columbus, Ohio. I wish to insulate my house for comfort and fuel saving. How do I proceed?

A. This is a patriotic duty which more than pays for itself. Maximum fuel savings require, (1) adjusting your heating plant to maximum efficiency, (2) insulating your attic and sidewalls, (3) double glazing or storm sash for the windows and weatherstripping around windows and doors. You will find that these can be paid for out of your fuel savings in from 3 to 5 years and will add greatly to your comfort permanently.

Q. Columbia, S. C. We plan to build a home without a cellar. What is the best type of heating equipment and where should it be located?

A. There are several types of modern efficient heating systems that do not require a cellar and take up very little space. They can be the floor furnace type, or the attic type. The most popular method is to put the furnace in a small utility room. The heat is taken to the various rooms through ducts in the attic. These several types are explained in the Heating Section beginning on page 263.

☆ ☆ ☆

Q. Washington, D. C. Is the SPAB policy of stopping nonessential construction aimed particularly at home building?

A. No. Unofficially and somewhat guardedly, some defense sources indicate that it was aimed in large part at what was called the "pork barrel" public works projects which have negligible defense significance or little public health and safety importance.

☆ ☆ ☆

A SCALE MODEL
of your own future house!

With this clever kit it's easy to build a real-looking model of *your own* future house, just as you plan it to be! One kit contains material for ANY traditional-design house . . . Cape Cod, Colonial, Pa. Farmhouse, etc. Follow any plans. Contains all kinds of doors, windows, trim . . . stone, brick, whitewashed brick, clapboard and shingle wall facings . . . shrubbery, lawn, roofs. Full instructions. Sturdy cardboard construction. Endorsed by architects. Send the coupon below today while it is in your mind.

Only $1.00

National Homebuilders Bureau, 572 Madison Ave., New York

Enclosed is $..... Please send me .... model kit(s).

Name ..... Address.....

City ..... State.....

Q. Chicago, Ill. How can I be assured of getting all the materials I need for my home costing approximately $5,000? And tell me in detail, if you will, what is the procedure.

A. In applying for a preference rating it is of the utmost importance that complete information and documents be supplied at the outset. Each question and detail in the application forms covers a vital point on which the approval or rejection hinges . . . therefore, *carefully answer or take care of every point!* Cases will be handled in the order received; hence if it is necessary to hold up an application because of omissions of information or documents, the process of acting upon the request will be seriously delayed.

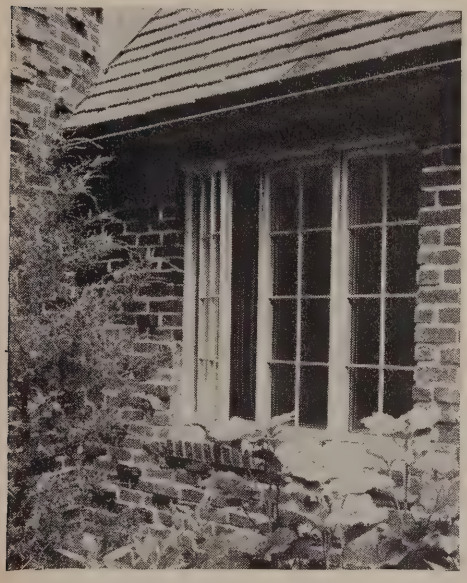
Local offices of the Federal Housing Administration will receive applications and pass upon their acceptability in a preliminary way according to the requirements of the Priorities Division of the Office of Production Management. The Application for Preference Rating, Form PD 105, must be filled out in quintuplicate, as must the Documentation Sheet—PD 105a for use in new construction for sale or rent, or PD 105b for use in rehabilitation projects. One set of drawings and specifications is required, and, when requested, a plot plan.

When the Federal Housing Administration has completed its examination of the application, it is forwarded to the Defense Housing Coordinator, who in turn sends it to the Office of Production Management for final action.

Since effort will be made by the Government agencies concerned to expedite handling of applications, it is requested that no inquiries be made as to the status of applications. Such requests will only slow down the procedure as a whole.

WINDOWS...

THE progress of mankind, and the improvement in his living conditions, is so clearly shown by the window as to make it practically a barometer of civilization. Years ago when life in general was hazardous, when police were unknown, and means of communication scarce, windows were small and placed high in the walls so that they would not present a ready means of entering the house. They were principally used as a means of defense, and not of ventilation. As living conditions became better, and settled communities offered some small sense of security, they became larger but still were fitted with heavy shut-



ters or battens to be closed in times of trouble. Today the larger the window the better, the more light and ventilation the better, and their securing is left to the small latch or hook that fastens them.

With the improvement of general living came the great interest in the idea of many windows. A few generations ago we were used to seeing row after row of the same-sized windows across the front of a house, first and second, and maybe third floor alike. The front door was set in perfect geometrical center of everything. Today windows are spotted here and there, wherever the owner's fancy or the architect's design wants them, and the modern house so treated reflects a sense of light and easy and pleasant living within.

Each year seems to produce another clever idea in window treatment. Sometimes it is the sliding window, or doubled-glazed window, again the corner window or picture window, and very lately the plant windows or shelf windows. We seem to have lost the idea that windows have to be in certain places, or of prosaic and orthodox design. We only need to look at a cleverly designed and engineered house to see what this has done to increase the charm and attractiveness of house exteriors. The result inside the house is even more pronounced.

Windows can be used as a feature of a house to better advantage probably than anything else that goes into its construction. A bay window in the right spot breaks up what would otherwise be a tiresome looking wall. A corner window relieves what was formerly an ugly angle. A round window, cleverly placed, adds a touch of the unusual; and best of all, they are all manufactured in such a manner as to permit of their easy installation in old buildings as well as in new.

The person who is interested in windows for a new house, or who is about to make an alteration which will involve the addition or change

Casement windows are becoming increasingly popular on all types of homes. They open out for full ventilation and are easy to clean.

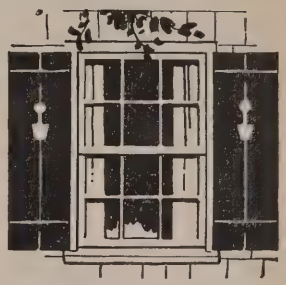
Modern casement operators are as lasting and easy to operate as your car window. They are particularly desirable over the kitchen sink.

SAVE!

✓ ON FUEL BILLS
✓ ON REPAIR BILLS

Use ANDERSEN LIFETIME WINDOWS in your new home

• ANDERSEN NARROLINE WINDOWS •



Conventional double hung windows with the beauty of wood shadow lines. Easy to operate, because they have true weight counter-balancing. Weatherstripped throughout.

• ANDERSEN CASEMENT WINDOWS •

Windows that swing out, not in. Equipped with heat-saving, removable double glazing (optional), and with inside screens. Exceptionally weathertight due to efficient weatherstripping.

• ANDERSEN HORIZONTAL GLIDING WINDOWS •

So modern they're revolutionary! So simple they're unbelievable! Sash glide from side to side, instead of up and down. Sash lift right out, for easy cleaning and for 100% ventilation. Weatherstripped, and equipped with removable double glazing (optional) and screens.

Sold by Lumber and Millwork Dealers

MAIL THIS TODAY

ANDERSEN CORPORATION
Dept. 41-SH, Bayport, Minn.

I am interested in home number ☐

Please send me your portfolio of Window Beauty Ideas. I understand there is no cost or obligation.

Name .....

Address .....

City ..... *State* .....

I will build ..... I will remodel .....

Easily interchangeable screens for the summer and storm windows for the winter are illustrated above. Even a child can install them.

A bay window such as shown above is desirable both for the interest it adds to the exterior and for the extra space it provides in the interior.

The home owner today no longer has to put up with sticking hard-to-raise-and-lower windows as modern craftsmanship has eliminated this.

of certain windows or their location, has a few things to keep in mind. The first is that as soon as a new and good design of window appears, it is liable to be copied in both inferior materials and workmanship. To the layman the real article and the imitation appear about the same. Of course, the price is in favor of the imitation, and he is quite liable to be led into a poor decision. If he does he will regret it, because there is a world of difference in windows, and he will probably discover it to his sorrow after a few months have passed, and the unseasoned wood has had time to swell or warp. Metal sash is subject to defects of inferior design and workmanship, although it will not warp. The name of a reputable manufacturer on your window assemblies is your safeguard.

Another thing to remember when you are selecting windows is that they are not a cheap item that can be changed as you would a tire on your car. While they are easily put in place, they are not so easily changed, because windows must have flashings about them, and the wall construction which fits one may not fit another. Labor is an item, to say nothing of the material. Take care with your selection, and be guided by someone who knows and has had experience in building or building supplies.

The modern window offers no end of conveniences in both operation and maintenance. Take for instance the double-glazed sash. This unit has two panes of glass within its frame, which makes it a storm sash as well as a window. Another design has a separate frame which is a screen, and another which is a second pane. You can snap either one into the assembly in a few seconds, and have screen or storm sash as you wish. The hardware of the modern window is excellent, and has benefited by many new and practical ideas. Among them is the spring balance, which eliminates the old trouble with sash-cord and pulleys. Casement windows are fitted today with many new ideas in hardware that make their operation less complicated, and their use a pleasure.

"The eyes of the house" as windows have often been called, can be beautiful or ugly. They can be appropriate or not, and it is worth the trouble, inasmuch as you are buying

SCREENS + PLUS STORM WINDOWS + PLUS WEATHERSTRIPPING

Enjoy This "Triple Service" Combined

in

RUSCO

ALL-METAL COMBINATION

Screen and Storm Windows

BEFORE you buy Screens—investigate the advantages of the popular RUSCO "Triple Service" Window. It is neat and perfect fitting; eliminates costly, bothersome seasonal handling and repair. Made to fit any style double-hung or casement window, in OLD or NEW homes. Sturdy construction of ARMCO rust-resisting Ingot Iron; bronze screen; L-O-F Glass—assuring lifetime service.

SOON SAVE THEIR COST

If included in your home at time of construction, the only cost is the down payment. *All further costs are balanced by FUEL SAVINGS effected!*

UP TO 30% FUEL SAVINGS !

Change from Screen to Storm Window in 30 Seconds!

Enjoy clear, sparkling windows; with rain-proof, draft-free Ventilation all year 'round.

You Wash Them—and Change Them —All From the Inside

Thousands of home owners praise the comfort, convenience, protection and ECONOMY made possible only by RUSCO. You should get all the facts NOW.

MAIL THE COUPON TODAY!

Send Me Illustrated Literature and full details about RUSCO All-Metal "Triple Service" Windows—

Name.....

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As offered in Fall 1941 Small Homes Year Book

THE F. C. RUSSELL CO.

1836 Euclid Avenue · Cleveland, Ohio

them for a lifetime, to see that the ones you select are right both architecturally and mechanically. You will know that immediately by the name of the manufacturer. The firm that is proud of its product puts its name on it plainly, but the other kind is disowned by its maker the moment he turns it out. It is nameless.

There is little sense in any controversy as to the relative merits of metal and wood sash. Each one has its advantages, and the fact that both are manufactured year after year, and are used in houses of all types and kinds speaks for itself. Price itself does not draw the mark between them, because you can buy metal sash in some cases for less than you can buy wood. The design of the house itself, as a rule is the guide that determines which should be used. The architect or the owner may have their own ideas as well.

Good windows play an important part in defense housing for several reasons: First, a weatherstripped window is a terrifically important factor in fuel economy; second, a well-made window will not leak and ruin other parts of the house; third, a well-made window will not require expensive repairs and alterations later on; fourth, a window that is prefabricated to include double glazing is important in the fuel economy picture. Good windows also play an important part in defense housing because they contribute to the comfort of a home. Good windows will not create unhealthy drafts in winter. Generous window areas permit the entry of larger amounts of sunshine and light—add pleasing beauty to the low cost home. Nothing sets a low-cost home so much apart from its neighbors as an unusual window treatment.

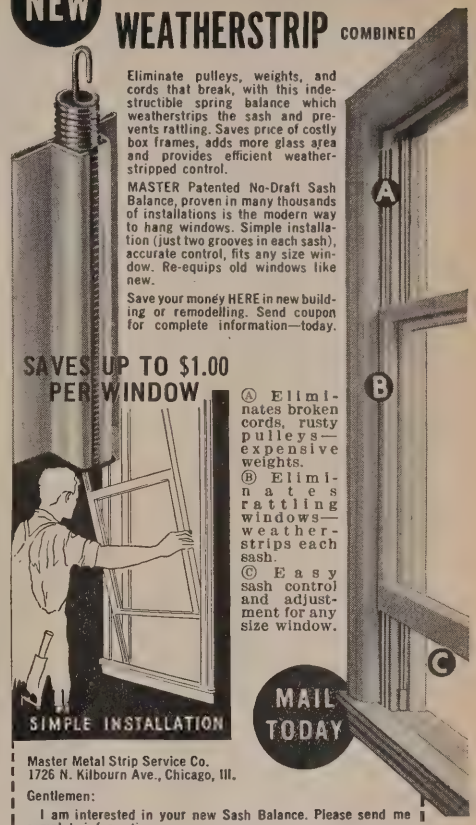
Windows play a very important part in the remodeling of old homes —either to make an old home more satisfactory for one family, or to make a large home suitable as living quarters for two or more families. Old windows are often balky in operation and must be changed. The conversion of second floors to independent living units requires in many instances the addition of bays, of single windows in new rooms, or the reallocation of windows.

NEW SASH BALANCE and WEATHERSTRIP COMBINED

Eliminate pulleys, weights, and cords that break, with this indestructible spring balance which weatherstrips the sash and prevents rattling. Saves price of costly box frames, adds more glass area and provides efficient weatherstripped control.

MASTER Patented No-Draft Sash Balance, proven in many thousands of installations is the modern way to hang windows. Simple installation (just two grooves in each sash), accurate control, fits any size window. Re-equips old windows like new.

Save your money HERE in new building or remodelling. Send coupon for complete information—today.



Ⓐ Eliminates broken cords, rusty pulleys—expensive weights.
Ⓑ Eliminates rattling windows—weatherstrips each sash.
Ⓒ Easy sash control and adjustment for any size window.

MAIL TODAY

Master Metal Strip Service Co.
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Gentlemen:
I am interested in your new Sash Balance. Please send me complete information.

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NEW AND BETTER WINDOWS THAT SAVE MONEY

NO OTHER WINDOW OFFERS ALL THESE ADVANTAGES!

MORE DAYLIGHT LARGER GLASS AREAS

BETTER VENTILATION FROM 3 DIRECTIONS

EASY OPENING NO STICKING

SAFE WASHING FROM INSIDE

SCREENED IN A JIFFY—SAFELY

STORM SASH COSTS LITTLE

Think of having the *double* window *beauty* pictured above and below, plus the *modern* window *conveniences* sketched at the right—features never before available at low cost.

Now you can be *certain in advance* that your windows are of high quality, are properly fitted, and are correctly installed. The new Fenestra Package Window comprises a high grade Steel Casement, Bonderized for rust prevention; Glass and Glazing; Casing and Outside Trim of California Redwood—all accurately assembled, delivered complete; Bronze-Finish Hardware included. Your builder installs it *right*, in a jiffy, using hammer and nails only . . . You save 3 ways: in first cost, in installation cost, in upkeep cost. Get the facts, judge for yourself. Mail the coupon.

Fenestra
PACKAGE WINDOW

Detroit Steel Products Company
Dept. SH-9
2271 East Grand Blvd., Detroit, Mich.

Please send me the FREE Fenestra Package Window Catalog.

Name_____
Address_____
City_____ State_____

WOODWORK BUILD BEAUTY AND VALUE INTO YOUR HOME

THE architectural detail of the exterior and interior woodwork are usually what attract you to a house. They are permanent and not to be replaced during the life of the house. Therefore, they should be carefully chosen to blend with the architectural design of the house as a whole. Today manufacturers have made available (at moderate prices) modern adaptations of the best in Early American and English woodwork. The wide selection makes it possible for everyone to have proper woodwork for any home, no matter what size, style or price. Displays can be seen in almost any lumber yard, and manufacturers have many appealing catalogs available for the asking.

Woodwork includes entrances, windows, doors, trim, mantels, stairway, and cabinets. It is expensive to change these when remodeling—so make a careful selection before the house is built. Be hesitant about "new fads" in woodwork. It is much better to select simple designs, with quality craftsmanship, made of sound selected kiln-dried wood.

We recommend that you visit your lumber dealer and ask to see authentic reproductions of stock woodwork as manufactured by established manufacturers. Their products are guaranteed to be of good material and workmanship and free from defects which render it unserviceable for the use for which it is intended. Study the architectural detail, because the correctness of such detail on the exterior and interior of your home enhances its value as well as its charm. This is important. A more complete home, an artistically correct home, and one of lasting quality follows the selection of good stock woodwork details.

See articles on "Windows" and "Fireplaces."

GOOD HARDWARE

ADDS AUTHENTICITY AND COMFORT TO YOUR HOME

Editor's Note: *To simplify this discussion we wish to explain that* architectural hardware *means that which is visible on the finished job such as door knobs, decorative hinges, and window operators.* Builder's hardware *may be hidden, such as locking and operating devices, but certainty of smooth accurate operation insures continuous living comfort.*

The wrought iron hinges and handles on the cabinets on the panelled fireplace wall of this living room add charm and authenticity, giving the whole room "character."

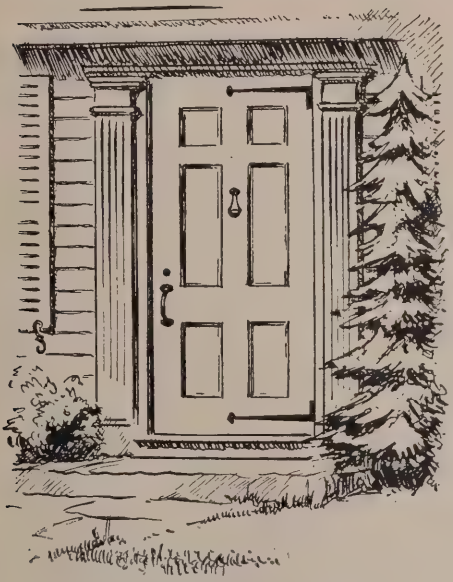
AMERICAN people are coming more and more to an appreciation of the decorative value of architectural hardware. The architectural style of a house and hardware design are very closely related. If the hardware is of good quality and properly selected to go with the architectural style, it will be a source of satisfaction every time you look at it!

Of all the materials that go into a house, there is none so frequently handled or seen as the hardware on the doors and windows. Hardware makes almost every moving part of the house operative! There is nothing more annoying than windows that are difficult to open or close, or doors that won't stay latched. Therefore, *quality* in hardware is an important item and *the extra cost is small!* Cheap hardware costs only about one-third less than good quality hardware. Good building practice indicates that about two percent of the cost of a house should be spent for the hardware. This is not much when you consider it will last the lifetime of your home!

Incidentally, the idea of modernizing with hardware is quite sound. It is surprising to see what a change is made by attractive new hardware on the front door alone. However, the cost of new hardware and labor to install it is many times the small difference in first cost of quality hardware and cheap inefficient hardware. Hence the economy of cheapness is a fallacy in the selection of hardware. If you are buying a home already built, be sure to examine the hardware for operating and appearance quality. Good hardware usually indicates good construction!

Through careful research hardware manufacturers have contributed authentic reproductions of the best traditional designs. These you will find in stock at your dealer's.

LET McKINNEY HELP YOU SELECT the HARDWARE for YOUR HOME



The Friendly Doorway

Let our style authority, Ellen Foley, advise you regarding hardware especially designed and best suited for the home you are going to build. If you plan to build, be sure to get this book. There is a style of McKinney hardware to fit your particular home.

McKINNEY MANUFACTURING COMPANY
PITTSBURGH, PA.

2-41
ELLEN FOLEY
McKinney Manufacturing Company,
Metropolitan St., Pittsburgh, Pa.
Please send me a copy of "How to Select Hardware."
Name.....
Address.....
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Architectural Style.....

OVER 75 YEARS DESIGNING AND MANUFACTURING GOOD HARDWARE

Write lifetime
CONVENIENCE
SAFETY
LABOR-SAVING
into the specifications of YOUR new home

PLUGMOLD
The Plug in Anywhere

CONVENIENCE WIRING SYSTEMS

UNDER KITCHEN CABINETS

CHAIR RAIL HIGH

OVER BASEBOARD

PLUGMOLD makes it possible for you to have ALL the outlets that comfort and convenience require, in exactly the right places. You can ADD or RELOCATE outlets as your needs change. Short sections may be installed at low cost beneath kitchen cabinets, under counter tops, at table height in breakfast nooks . . . or entire rooms may be wired with PLUGMOLD above the baseboards. PLUGMOLD may be painted to match trim. Ivory or brown plastic outlets are small, unobstrusive.

Write for full information and blue print suggested layout for home you are interested in.

MAIL THIS COUPON

The Wiremold Co., Hartford, Conn.

*Name*_____

*Address*_____

I am interested in home plan No._____

WIRING . . . ADEQUATE WIRING ASSURES THE LASTING VALUE OF YOUR HOME

SMOOTH and economical home management today depends more upon house wiring than you might suppose. And, with the constant introduction of new appliances, it is wise to make your wiring sufficient for future needs at the time of building. It will save much expense in the end.

Fortunately, national standards of home wiring adequacy are available. Check your new home plans against these standards and ask a qualified electrical contractor to install the circuits, outlets and switches you find lacking.

STANDARDS

HOW CAN I PLAN ENOUGH BRANCH CIRCUITS TO SERVE ALL MY HOME WIRING NEEDS? Circuits: A lighting circuit for each 500 square feet of floor area in the finished parts of the house; appliance circuits of at least No. 12 wire to convenience outlets in dining room, pantry, kitchen and laundry; special purpose circuits to major appliances.

Lighting Outlets: A central ceiling unit in each room of the house excepting lavatories and small bathrooms; supplementary lighting over each work center in kitchen and laundry; supplementary units on either side of the bathroom mirror and in other rooms if desired. Lights at the head and foot of each stairway. A light for each large closet, with pull switch or door switch. Lights at each house entrance—two, if possible, at the main entrance.

HOW CAN I PLAN MODERN LIGHTING WITH ENOUGH SWITCHES? Lighting Switches: A switch on the latch side of the main doorway into each room to control the chief lighting unit. When there are two or more doorways over ten feet apart, multiple control switches should be placed on the latch side of each doorway. Multiple control switches at the head and the foot of each stairway to control lights on both levels. Also, multiple control switches to provide light ahead and turn-off lights behind along hallways. For the principal basement light, a switch with pilot light at the head of the stairs. For the attic light, a switch with pilot light at the foot of the stairs. A switch to control the lighting of each house entrance just inside the door.

Convenience Outlets on Lighting Circuits: One convenience outlet in each usable wall space three feet or more in length at the floor line in living rooms, bedrooms, sun rooms, libraries, reception halls, recreation rooms and dens. Additional convenience outlets placed so that no point is more than six feet, measured along the floor line, from an outlet in any wall space unbroken by a doorway. A convenience outlet flush in the top of each mantel shelf, if construction permits. A convenience outlet for each 20 feet of hall or major fraction. In bathrooms, a convenience outlet located away from the tub. A convenience outlet in the basement where a work bench might be set up.

HOW CAN I BE SURE MY HOME HAS ENOUGH CONVENIENCE OUTLETS? Convenience Outlets on Appliance Circuits: In dining room or breakfast room, a convenience outlet in each wall space where a buffet or serving table may stand (a floor outlet may replace one of these or supplement them). In dinette or breakfast nook, a convenience outlet at table height where the table will touch the wall. In the kitchen, a convenience outlet at elbow height at each work counter, and any additional outlets needed for special purposes such as clock, refrigerator, ventilator fan, or dishwasher type of sink. In pantries, a convenience outlet at elbow height at each service counter. In the laundry, a convenience outlet to serve each work area, with a pendant outlet conveniently located in front of the tubs.

Special purpose circuits to major appliances (range, water heater, automatic heating control, etc.), outdoor weatherproof outlets, porch and garage lighting, and other necessary conveniences of electric service can be planned in consultation with your electrical contractor.

THE FIREPLACE . . .

THE fireplace is the symbol of hospitality, for it is before the cheery, warming embers of the fireside that the charm and friendliness of the home are best expressed. Up until a few years ago, however, the fireplace that didn't smoke was an exception. But nowadays it's different, because within recent years a new type of fireplace built around a metal unit has been developed to overcome this nuisance. In addition to supplying the cheeriness characteristic of all fireplaces, it actually circulates heat to far corners of the room—makes use of the heat that formerly was wasted up the chimney.

This new-type fireplace looks like an ordinary fireplace. The difference is inside the masonry, out of sight. For the masonry of the fireplace is built around the metal unit —a double-walled heating chamber of heavy steel containing the damper, firebox, smoke dome and down draft shelf as built-in parts. The entire unit is so designed and proportioned as to eliminate all the usual difficulties encountered in building a fireplace. It rules out the chance of error by the builder, and it corrects the faults that commonly cause smoking. Any type of masonry or style of mantel can be built around it.

When a fire is burning in this kind of fireplace, air from the room is drawn into the heating chamber around the fire, is warmed there, and then circulated by natural draft to far corners of the room and even to adjoining rooms. This circulation of warmed air makes the largest living room and even the entire house comfortable on cool spring and fall days, thereby eliminating the necessity for wasteful furnace fires and cutting dollars from heating costs.

Since the metal unit serves as a complete form for the masonry it saves considerable time in building the fireplace. The designing is done —the mason simply sets the unit on the firebrick floor and builds up around it. As a result, it is easier and cheaper to build a fireplace with the metal unit than without it.

Plan Your FIREPLACE as Carefully as You PLAN YOUR HOUSE!

Find Out Now About the HEATILATOR Fireplace

• CIRCULATES HEAT
• WILL NOT SMOKE
• CUTS HEATING COSTS

Your fireplace will last as long as the house, so plan it carefully. And protect the future value of your house by building a modern fireplace. Ask your dealer today to show you a HEATILATOR FIREPLACE, the new-type fireplace that uses a new heating principle—entirely different from old-fashioned fireplaces.

The Heatilator Fireplace circulates heat—actually warms every corner of the room and even adjoining rooms. It cuts heating costs spring and fall . . . solves the heating problem in basement rooms . . . and it makes camps usable weeks longer.

PROVED ALL OVER AMERICA

Your fireplace is a long-term investment. Because it is, you should make certain that you can always rely on it. The Heatilator Fireplace has been proved for more than a decade in thousands of homes and camps. It's the perfected result of years of engineering study and development—simple, reliable, practical in every detail.

WILL NOT SMOKE

The Heatilator is a double-walled chamber of thick steel. Concealed by the masonry, it serves as a form around which any style of fireplace is correctly built. It eliminates common faults of design that cause many fireplaces to smoke . . . simplifies construction . . . saves materials. Adds but little to cost of fireplace. See it at your lumber or building supply dealer today, or mail the coupon below.

FREE INSTALLATION DATA

Heatilator installation data for the small homes shown on pages 19 to 26 will be sent to you free on request together with complete Heatilator information. Just fill out the coupon below for this special service.

HEATILATOR COMPANY
695 E. Brighton Ave.,
Syracuse, N. Y.

Please send me complete Heatilator information and special recommendation for House No. .....

Name.....

Street .....

City.....State.....

HEATILATOR Fireplace

PROTECTION . . .

THERE has never been a time during the past century when protection of the home against weather (and the other destroying agents) has been so vitally necessary. Building materials for use in replacements and repairs are not to be easily had, and the manner in which the present rearmament and defense programs are taxing the production of the nation's factories indicates that there will be even further difficulty in replacing them.

To the far-sighted individual, this very clearly shows the necessity of taking excellent care of his home and its component parts, and of protecting it against the ravages of weather and destructive insects. If the home owners of the country, as a body, were to embark on a program of home maintenance at this time, they would render a very distinct service to the nation and to themselves as well.

The average home is not such a complicated nor delicate structure that it requires the services of an expert builder to see what it needs in the line of attention. In fact any intelligent adult can inspect it and see where the woodwork needs paint, and where termites or other destructive insects have attacked or weakened it. Common sense should dictate the next steps.

A paint neglected house is a house on the way to decay and deterioration. If it is painted now, in time, it will furnish years of additional service and comfortable housing. It will retain its value from a sales angle. It will not require expensive and probably unobtainable repairs.

Termites work in a manner that destroys beams and other wood members of the house. They can be thwarted in the first place by shields which are properly placed at foundation level or other spots that connect the house with the ground. Where they have already established a foot-hold, they can be destroyed with chemicals. The best method of locating them is to stab any timbers or woodwork you suspect is infested, with a knife or ice-pick. If the wood seems pulpy or soft, further measures are in order. If the wood is firm and normal, it is probably all right.

Fire is a menace at all times, but now in particular, because even though you may be well-covered by insurance, and have the money with which to replace your home, it is doubtful if you would be able to. The usual precautions against fire should be doubled. The utmost care should be taken with furnaces, fireplaces, electrical wiring and devices that generate heat. Carelessness should be ruled out entirely. Insurance policies must be in order and premiums paid promptly. Everything possible should be done to protect the house against damage or loss by fire.

A very clever individual once made the statement that he could keep his house in perfect repair by the use of only one instrument, the telephone. Probably he was right; but during the present emergency, telephone orders for replacements of either materials or equipment are not liable to meet with the ready response they once did.

If your house is equipped with a coal-burning furnace, you might do well to see that it is cleaned and in proper working order. You might be careful in shaking it so as not to break the grates. Treat it as though you wanted it to last.

If you have an oil-burner, see that it is properly adjusted so that it burns economically. Set the thermostats so that excessive temperatures are not worked up. See that motors and blowers are oiled, so that bearings will last. You may not be able to replace them.

See that gutters and leaders are in repair so that they will protect the walls of the house and keep them from being soaked by the drainage from the roof.

Look over your windows, and make sure that the glass is tightly in place, and that the putty is not loose or missing. See that they work easily and do not have to be slammed and strained to operate them.

(Continued on page 274)

Small HOME BUILDERS

DEFENSE RULING Helps You!

★★OPM has placed termite shields on priority list for privately financed Defense Housing constructed in termite infested areas. F.H.A. specifies shields in many sections of the country.

TECO TERMITE SHIELDS

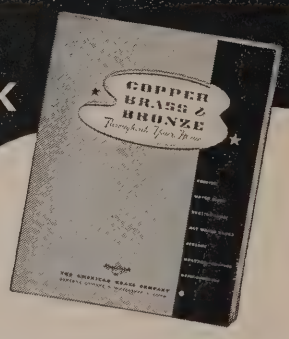
give your home economical protection.

TIMBER ENGINEERING CO., INC.
1337 Connecticut Avenue
Washington, D. C.

Mail Coupon Today

Timber Engineering Company, Inc., Dept. AS-12
1337 Connecticut Avenue, Washington, D. C.
Please send information on TECO Termite Shields.
Name.....
Street.....
City..... State.....

FREE BOOK



COPPER and BRASS
can save you money, give you better value

Every year more homeowners come to know the solid worth of copper, brass and bronze. Used in place of temporary, rustable metals, they bring definite upkeep savings that more than pay for their slight extra cost. This fine free booklet gives interesting, practical information. Use coupon, now!

The American Brass Company,
Waterbury, Conn.
Please send me your free booklet No. B5-HH.
Name.....
Address.....
Street
City..... State.....

Equipment

Herein are pictured and explained some of the many improved types of equipment that add comfort and ease of living to homes. Modern heating is economical and requires only pushing the thermostat to regulate the temperature! A well-planned kitchen saves miles of steps and removes the drudgery and discomfort of household tasks. The modern bathroom with plenty of hot water is indeed a tremendous addition to the comforts of living.

New EVANAIR HEAT PACKAGE

FURNACE, DUCT, WATER HEATER
ALL IN ONE PACKAGE
Ready for Small Home Installation

When the DEFENSE HOME BUILDER Looks for LOW-COST HEATING . . .

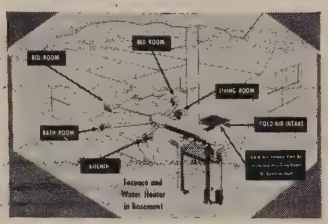
. . . he gets all his heating requirements in the Evanair Heat Package.

The Heat Package meets today's demand! Low-priced, as easy to install as any standard appliance.

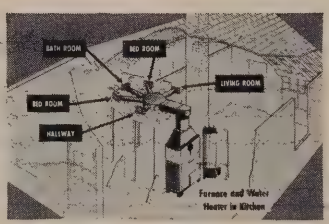
Designed by heating engineers and building authorities specifically for homes selling under $6,000.

NO WIRING— NO ASSEMBLY

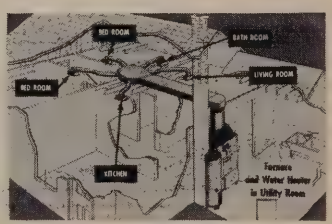
The simple, time-saving, easy way to buy and install heating equipment: order duct package with furnace and water heater. Duct work is designed for furnace.



Furnace and Water Heater in Basement: Basement Installation of Evanair Duct Package.



Furnace and Water Heater in Kitchen: Hall Installation of Evanair Duct Package.



Furnace and Water Heater in Utility Room: Attic Installation of Evanair Duct Package.

UNITS FOR EVERY *Low Cost* HEATING NEED!

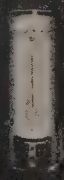
Defense home builders look to Evanair-Evanoil for low first cost; home owners for economy and trouble-free operation.

EVANAIR FURNACES WITH BLOWER—
Oil- and Gas-Fired
70,000 and 75,000 Output.

MODEL 601 EVANAIR FURNACE
(Gravity Type)

65,000 B.T.U. output—30" x 30" x 58"—basement only—manual or automatic.

EVANOIL WATER HEATERS
(OIL-FIRED)

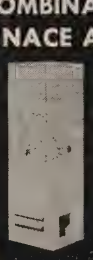


20, 30, 40 and 45 gallon capacities—automatic.

EVANAIR WATER HEATER
(ELECTRIC)

Constant flow hot water—no tanks.

SENSATIONAL EVANAIR COMBINATION FURNACE AND WATER HEATER—



Evans leads again! 40,000 B.T.U.—15 gallons.

EVANOIL-EVANAIR
OIL- AND GAS-FIRED
SPACE HEATERS

Radiant, Semi-Radiant, Circulator, Fan-Forced Circulator.

EVANAIR Floor Furnaces
(OIL-FIRED)

Model FF-55—55,000 B.T.U. capacity, Model FF-45—45,000 B.T.U. capacity. 24" x 36" x 37"—limit control.

Use QUICKMAIL COUPON No. E-1

Evans Products Company (Evanair Division), 15310 Fullerton, Detroit, Michigan.

Send me FREE: ☐ "Manual of Modern Low-Cost Home Heating"; ☐ Evanair Heat Loss Calculator to help me determine correct size heating equipment for ANY installation.

Name_____

Address_____ State_____

City_____

EVANAIR DIVISION
EVANS PRODUCTS COMPANY · DETROIT, MICHIGAN

HEATING . . . AIR CONDITIONING . . . DOMESTIC HOT WATER

THE visitor from the foreign country is greatly impressed with the luxury of the American home. The general use of electric refrigeration, the telephone, the number of electric light outlets, the sparkling bath-rooms, and the scientific kitchen, seem seventh-day wonders. The convenience and comfort of the heating plant, whether automatic or manually fired, and the abundance of domestic hot-water, to be had by the mere turning on of the faucet, are most impressive of all. As a matter of fact it is quite remarkable that a nation so young should lead the world in standards of domestic comfort as well as in engineering, invention, and science.

The old theory that one must be cold to be healthy, has been proved as great a fallacy as the idea that one must be thrown overboard to learn to swim. Comfort and health go hand in hand in the modern home that is equipped with present-day heating plants and hot-water equipment. How much healthier the occupants of a well heated house are than those in poorly heated homes, is a matter of our national statistics against those of any other country, during a winter season.

Nowhere is this fact more clearly demonstrated than in the new wave of defense building now going on. In the last war, defense homes were often thrown together, with little thought given either to permanence or to the comfort of the occupants.

Now the situation is completely changed. The best homes are good homes, and economical as well. The defense worker, so important in modern mechanized warfare (it is estimated that twenty defense workers are needed for every soldier at the front) is looked upon as a soldier behind the lines.

These new, low-cost defense homes cater to his comfort, as is done in no other country in the world. It is recognized that he must be comfortable at home for maximum efficiency on the job. Consequently much thought is given to the question of heat—plenty of available heat for living comfort, plenty of low-cost hot water.

Modern defense needs also specify one other important requirement—the importance of saving fuel, whether it be oil, gas, or—because of transportation problems—coal. The ideal heating plant for modern conditions must therefore fulfill two important requirements:

1. It must be adequate, able in emergency to furnish heat and hot water for the severest climatic extremes.

2. It must be economical, wasting no fuel, using every last bit of heat possible.

Heating engineers clearly recognize this problem and have taken steps to solve it. One of the most promising developments along the line is the so-called "heat package"—designed specifically for the small and the defense type home. This "heat package" consists of a furnace, all the necessary duct work, and a hot water heater—a complete home-heating plant all in one. By prefabricating the unit to fit literally any new home costing under $6000, heating engineers found the very thing they were looking for in defense home construction, for maximum comfort and minimum fuel bills. Furthermore they were able to make substantial savings in first cost and in installation.

A similar development, also specifically meeting small home requirements, is the package space heater. This is simply a space heater and automatic water heater constructed in one unit. Because it takes up less room than a separate heater and hot water supply, it is suited to the very smallest homes in northern climates, and to larger dwellings in the South.

The furnace type space heater which, by fan-forcing warm air out at floor level, eliminates cold floors and hot ceilings, combine the best features of the furnace and the space heater.

Probably the utmost in space saving has been achieved in an electric water heater which, in effect, requires no space at all! Because it supplies hot water only when needed, there is no storage tank to worry about. Because it is designed to fit either on the faucet or in the wall above, no extra piping is needed.

These are a few of the many contributions to living comfort made possible by American inventiveness and the American standard of living. They are proofs, if any be needed, that small homes in America today can be, and are, just as comfortable and just as livable as the largest mansion. The remarkable advances in heating plant design that have been made in recent years, are in large measures responsible.

There is a great deal more to the modern heating plant, etc.

There is a great deal more to the modern heating plant than just a large receptacle in which to burn coal, oil, gas or other fuel. How much more there is to it, is interesting. In the first place, a modern plant is odorless, noiseless and safe. It uses a minimum of fuel. What it does use is so well processed and handled, that the last possible ounce of heating energy is extracted from it. An excellent example is the manner in which the fuel for an oil-burner is atomized and broken up so that it will mix with the air and produce perfect combustion; or for another

SAVE FUEL FOR DEFENSE

by

Keeping the flues of the boiler clean. (You save as high as fifteen out of every hundred gallons of oil with a clean boiler.)

Adjusting the nozzle of the oil burner, or the air inlets of the coal burner. (No fuel burns without oxygen. The correct mixture means perfect combustion always.)

Burning a good quality of fuels. (Cheap coal means soot and cheap oil means carbon. They are not economical nor are they correct.)

Insulation. (Every square foot of insulation in the walls or in the roof means less fuel for the house and more for our defense.)

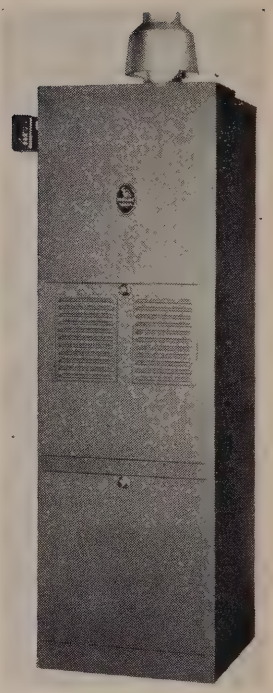
Storm-sash. (These have always been the first consideration for fuel conservation and comfortable homes. They are reasonable today.)

Weatherstripping. (The modern kind are easy to install and do not interfere with window operation. No more drafts or leaks with these.)

example, the way in which some of the automatic coal stokers force the fresh coal up through the fire-bed, thus consuming every bit of gas in the coal instead of smothering the fire by throwing the fresh coal on top of it. Both are very clever ideas, worked out by the staff of large manufacturers, intent on the best for the homeowner.

Going further along the line of the nation's heating equipment, we come to the section most closely identified with our health. We can all remember the dry, burning sensation in eyes, nostrils, and throat, when the house was overheated years ago. The reason of course was that there was a scarcity of moisture in the air. The modern plant provides the proper moisture; and as a result of this automatic humidification, we live and breathe in an atmosphere both pleasant and healthy. At the same time that the air is humidified, it is screened or filtered so that dust is removed from it.

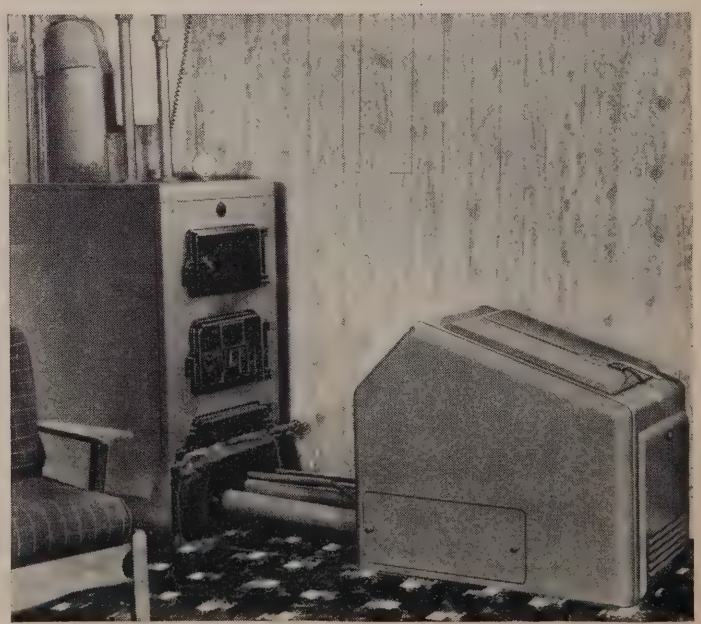
Still further progress has been made in the matter of the amount of attention required by the heating plant. Literally this has been reduced to an almost ridiculous minimum. In the fully automatic heating job, the thermostat maintains a constant level of temperature in accordance with the individual's requirements. At night this temperature is reduced to a sensible level, and at morning raised again to daytime heat. Not a finger need be raised nor a step taken. Automatic valves



The vertical type gas winter air conditioner for use in a small home is so compact it can be placed in a closet (with a grille cut into the door) or in any available space on the main floor level. It heats, humidifies, filters and circulates the air.

replenish the water supply, hydrostats and aquastats do their part without fuss or bother, and all that the owner has to do is to enjoy the comfort. Contrary to what you might expect, these controls are small and compact and give no indication by size, of the amount of labor they save.

In the matter of domestic hot-water, that boon to the housewife, the progress has been equally as great. The automatic heaters keep an ample supply at hand at all times, day or night. The temperature of the water is regulated by an aquastat automatically so that overheated water is avoided. The insulation of



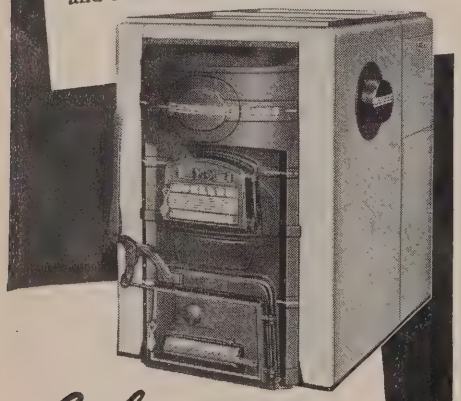
Modern stokers, by taking the dust and dirt out of coal firing, have given further impetus to the utilization of basement space for recreation purposes.

Healthful comfort-heating is so economical now — with

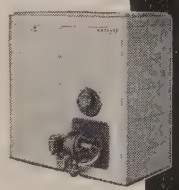
MUELLER *Winter Air* CONDITIONERS

— no need for you to miss enjoying it for another long winter

Mueller engineers have cut fuel costs to the bone — by designing special equipment for each type of fuel and for each size and class of home. First cost and operating cost are amazingly low. Plan your budget to give you this added comfort *right now* — in your present home or a new one. Write for Mueller's free, colorful literature. Tear out and mail the coupon. C-5A

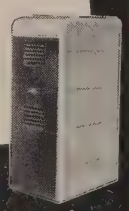


Coal Coal-fired winter air conditioner. Filters, heats, humidifies, positively circulates warm air to every corner of your home.



Oil Attractive appearance and "de luxe economy" are yours with Mueller oil-fired winter air conditioning furnaces.

Gas Modern winter air conditioning units —or boilers for steam or hot water — that make your basement a showplace.



MUELLER *Milwaukee*

L. J. MUELLER FURNACE COMPANY
2015 W. Oklahoma Ave., Milwaukee, Wis.
Please send me "The New Trend in Home Furnace Design," also literature describing furnaces for:
☐ Gas ☐ Oil ☐ Coal
☐ Gas Boilers ☐ Gas Floor Furnaces
Name.....
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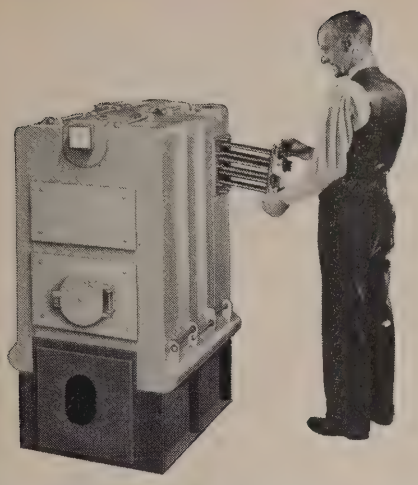
City.....State.....



Here a coil for heating domestic hot water is being placed in the boiler. This coil eliminates a hot water storage tank. The boiler is then concealed under an attractive metal jacket.

the storage tanks has been improved so that less heating is required. Glass tanks have come into use to avoid rust, or other possible chemical reactions that might be objectionable. The hot-water situation has reached perfection for anyone ready to avail themselves of the modern equipment. The price is within reach of the modest home budget.

The three types of heating systems are still designated by the name of the medium through which they transmit their heat, namely steam, hot-water, and hot-air. The steam systems are known as the One-pipe steam, the one-pipe vacuum, the two-pipe steam and the two-pipe vapor. The improvements in them are more a matter of refinement than of any radical departure from their former design. The hot-water system which is so popular because of its even and economical operation, boosts a decided improvement in the fact that it is now available in a one-pipe job, whereas formerly two pipes were required to circulate the hot water from the boiler to and through the radiators. The use of an exceedingly clever fitting enables the hot water to travel both ways through the same pipe at the same time. This does away with half of the cost of the piping in a hot water system. Its use is confined to an automatic plant which is thermostatically controlled.

The clever contrivances called "circulators" deserve mention. These increase the speed of the circulation in hot water systems, and only allow the water to enter the boiler when it needs re-heating.

The hot-air systems are of two kinds, the Gravity and the Forced Air Circulation systems. The chief difference between them is in the fact that the forced air system uses a motor driven fan which draws the air from the rooms back to the furnace for re-heating, and forces it at pressure back to its work. Naturally the ducts can be smaller than in the gravity system which relies on the principle that hot air rises cold air falls.

The three fuels in general use are coal, gas and oil. Coal, which formerly was the least flexible or easy to handle, is now extremely popular because of the development of the automatic coal stoker, which does away with handling. Oil has been a splendid fuel, and is better today because of the improvement in the burners that convert it for use. Gas of course is the ultimate in automatic heating. It is not only the cleanest of fuels, and the most efficient, but requires the least attention of all.

One of the great objections to low grade fuel oil was its tendency to carbonize and clog the burner

STEEL CELLAR DOORS

Improve the Value of Your Home

OUTLAST YOUR HOME

Make your cellar useful, safe, dry!

Whether you build, buy or occupy, look for this vitally important feature. Insist on a direct way to the yard with the modern, permanent, trouble-free COPPER STEEL BILCO CELLAR DOOR. Immune to water, weather, fire, termites and decay.

Ask Your Building Supply Dealer, or Write Today for Free FOLDER to

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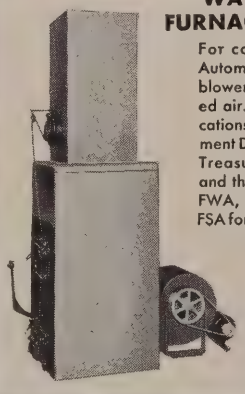
Three ways to heat DEFENSE housing *with* FITZGIBBONS UNITS – *designed and specifically adapted to meet all conditions*

Priced to fit the market—Easily and quickly installed—Exceptionally low in fuel consumption. *Mail the coupon for full details.*

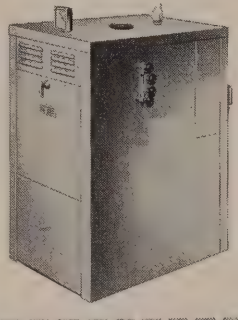
WARM AIR FURNACE 80 FWA



For coal hand firing. Automatically controlled blower circulates warmed air. Meets all specifications of the Procurement Division of the U. S. Treasury Department, and the requirements of FWA, USHA, PBA and FSA for Defense Housing. Fitzgibbons "Weldseal" construction positively insures against leakage of flue gases.

FITZGIBBONS 400 SERIES STEEL BOILERS

The choice of architects and builders for low cost heating of small homes, including defense housing using radiator heat with oil, gas or stoker firing, or coal hand firing. Built-in copper coil gives domestic hot water. All the advantages of steel boiler construction. Attractively jacketed, priced for the field it serves.



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A distinctly *small home* warm air furnace conditioner, of welded steel construction. Warms, humidifies, filters and circulates the air. Quiet in operation, beautiful in appearance. Extremely low in fuel consumption.

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Send me details on Fitzgibbons defense housing heating units.

80 FWA ☐ 400 SERIES ☐ 65 - 80 - 100 DA ☐

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Have a Super-Comfort Home with SUPERFEX!

A COMPLETE LINE OF GAS AND OIL BURNING FURNACES FOR SMALL HOMES

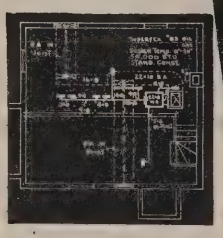
One of the most important things in building or remodeling a small home is the heating unit. To get your money's worth, you need a furnace that will give you years of *maximum heating comfort at low cost.* SUPERFEX—made by specialists in small-home heating for 10 years—does that job to perfection! Thermometer test-readings prove SUPERFEX assures super comfort from floor to ceiling—proper heating in every room. (See illustration at left.) And—records prove SUPERFEX users' reports of "lowest cost fuel bills we've ever had with any kind of heating plant!"

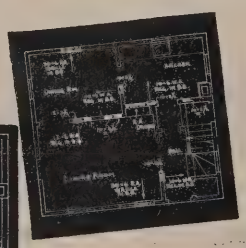
Send for free blueprints of heating plans for Small Homes Year Book houses

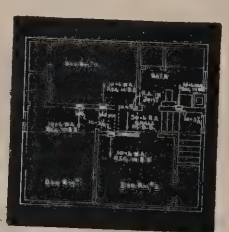
You can have—free—heating plans showing location of furnace, ducts, registers, etc. of homes illustrated in this issue of Small Homes Year Book on Pages 225, 226 and 227.

Get big, 48-page Heating Facts Book free, too!

The big SUPERFEX Book of Facts on Low Cost Heating gives you information never before available in a book like it! Questions and answers—case histories—verified fuel cost figures—floor plans—and other helpful information! Send coupon below *today.*

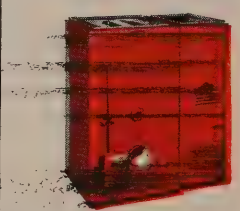






Blueprint heating plans available free, for homes shown on Pages 225, 226 and 227, in Small Homes Year Book.

Small-home SUPERFEX gravity furnace. Manual or automatic control. *Costs no more than coal-burning equipment. Models for either oil or gas.*



Winter air-conditioner SUPERFEX furnace for small homes with basement. *Models for either oil or gas.*

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All illustrated models factory-assembled, wired and tested—delivered completely "packaged," ready for connection.

Also, a complete line of famous SUPERFEX 24-hour winter air-conditioner furnaces, either oil or gas. B.t.u. capacities range from 50,000 to 150,000.

SEND COUPON TODAY!

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Please send me *free* heating plans for home on (check which):
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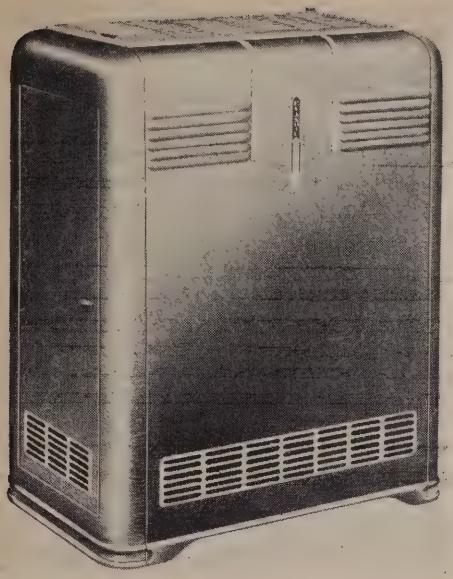
WORLD'S LARGEST MAKERS OF OIL BURNING EQUIPMENT FOR THE HOME

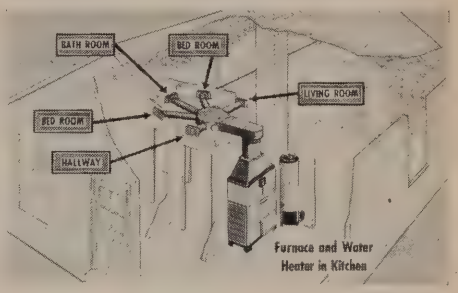


Typical room heater. Space heaters come in oil, gas, coal, wood, and kerosene burning types. The one above operates on oil and the principle of a forced floor level heat, eliminating the objection to space heaters of cold floors.

nozzles. A new development does away with this by a clever method of automatically burning off the carbon deposit as it forms. Just another step in the manufacturer's constant search for better and more economical means of heating. There is little use in a discussion of the comparative costs of these fuels because so much depends on the conditions of your house, and the locality in which you live.

The radiators which distribute comfort to the room in which they are located, have undergone changes almost as great as that of the boilers or furnaces themselves. Bulk is no longer a requisite of ample heat. Better engineering and design have enabled the manufacturers to reduce size and increase capacity. The long heavy radiators that indicated a well heated area have been replaced with units that in some cases are actually not in sight at all. When we consider the amount of heating energy required to heat the bulky old-fashioned iron castings alone, we have some idea of the economy presented by the new designs. More heat for the room and less for the radiator itself means fuel economy.

Many people are mystified by reference to "radiated" heat, and "convected" heat, when in reality it is simple to understand. Here is the explanation. When you hold your hand close to a hot radiator, you feel



A furnace, water heater and complete duct system in one package that can be installed in any low-cost home.

a distinct glow, warmer than the air about you. That is radiant heat, which is radiating out from the radiator in straight lines. Move away from the radiator and you still feel a warmth, but not as intense. That is because the air about you has been warmed by direct contact with the

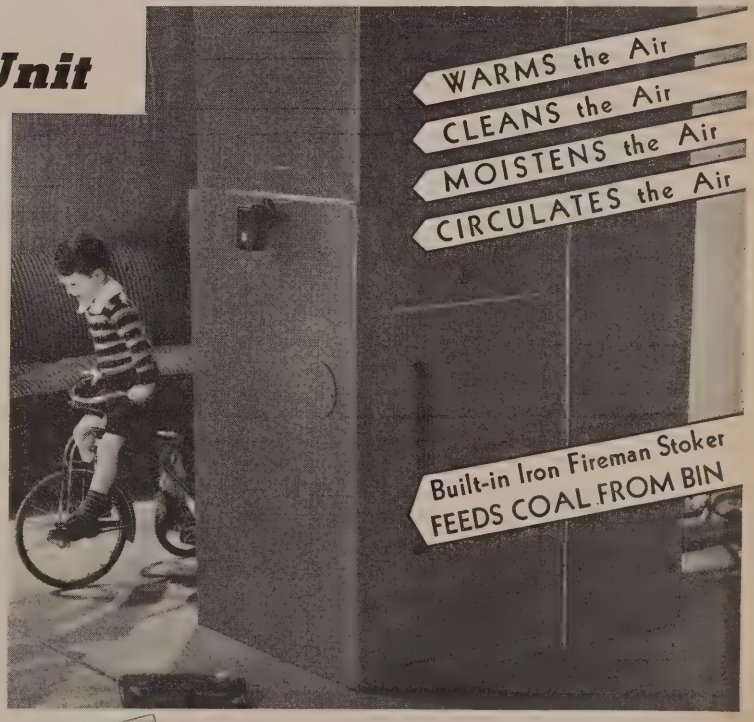
The Ideal Heating Unit for Small Homes . . .

Iron Fireman Winter Airconditioner

Buy on Liberal FHA Terms

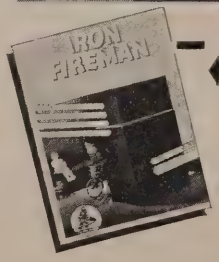
NOW you can have healthful automatically-controlled winter airconditioning . . . with both low *first* cost and low *fuel* cost!

The great Iron Fireman Winter Airconditioner uses money-saving stoker coal. No longer is it necessary to saddle your home with expensive fuels in order to enjoy *automatic* heating and winter airconditioning. This new Iron Fireman unit warms, cleans, moistens and circulates the air. It feeds itself with coal from the bin! Its operation is quiet, clean and dependable. Because of its steady burning solid firebed, the Iron Fireman Winter Airconditioner produces a *smoother* flow of warmth than is produced by similar winter airconditioners which use "pop-on, pop-off" fuels. Don't delay. Can be financed on liberal FHA terms.



IRON FIREMAN

Automatic Coal Burners



MAIL FOR FREE COPY of informative folder which clearly shows how the Iron Fireman Winter Airconditioner achieves its remarkable results.

Mail to:
IRON FIREMAN MANUFACTURING CO.
3396 W. 106th St., Cleveland, Ohio.

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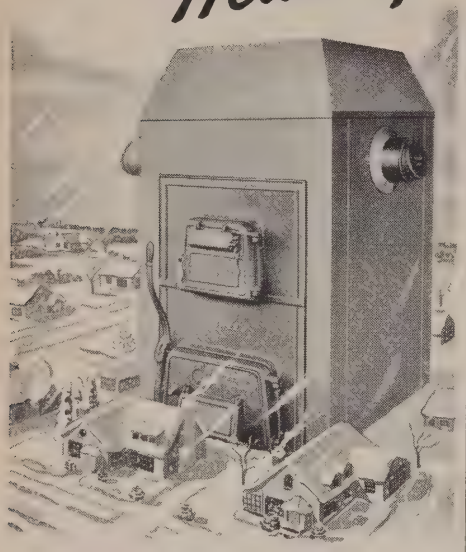
BUILD LASTING WINTER COMFORT INTO YOUR HOME WITH

Moncrief Heating

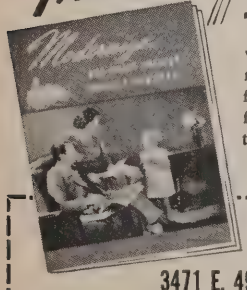


LOW COST...RELIABLE

● Learn all that Moncrief affords in efficient, economical home heating equipment at prices that give you the most for your money. Moncrief has provided a complete package unit especially engineered for each of the plans shown in this book.

Moncrief furnaces and winter air conditioners are the product of a firm specializing for nearly half a century making home heating equipment. All are scientifically designed, made of quality materials and beautifully styled. You can depend on every Moncrief giving the utmost in comfort and big value.

This Free Book



TELLS YOU—

what to look for in a modern heating plant for small homes. Profusely illustrated. Written in simple language.

THE HENRY FURNACE & FOUNDRY CO.

3471 E. 49th St., Cleveland, O.

Please send me your big free book describing Moncrief warm air furnaces._____
Also send literature on Moncrief winter air conditioners. _____

Name _____

Street _____

City and State _____

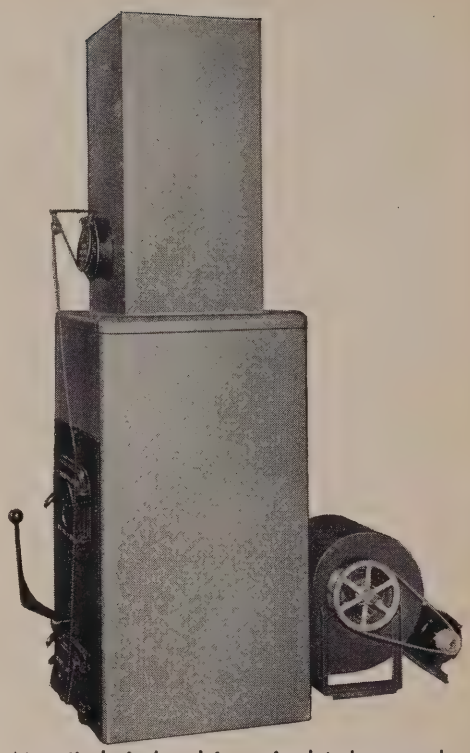
hot radiator, and not by radiation. This is convected heat. The heating plant which uses radiators does a double job. It heats by radiation and by convection both. The air-conditioning and heating plants that do not use radiators, furnish you with convected heat alone. There is more or less of a fine point to be made as regards just how much difference this makes to the average house or its occupants.

In selecting a heating plant, there are a few major considerations that the homeowner must not overlook. Probably the most important is the size of the boiler and air-conditioner. There is absolutely no economy in the few dollars saved by installing a plant that just meets or does not quite meet the requirements of the house. There is economy in an ample or even in an oversized boiler. There is economy in the right type of fuel to be selected. This is dictated by the locality in which you live. There is economy in the selection of a boiler that is made and guaranteed by a reputable manufacturer. Its capacity and rating will be honest. It is important that radiators be properly placed, or ducts terminated at the proper spots. The manufacturers make no charge for advice through their representatives or dealers on this point. Avail yourself of an expert's opinion.

All heating plants that are manually operated can be modernized and made completely automatic by a number of the coal and oil burning conversion units that have been developed recently. Not only do they do away with drudgery, but they increase the efficiency of the boiler or furnace by automatically correct firing as well.

The same precautions that should be taken in the selection of a boiler or heating plant apply to the domestic hot-water heater. Buy something with a name so that you purchase the years of experience that have gone into the equipment, and not merely a tank. Educate yourself in heating and hot-water supply before you spend your money. You will find it an interesting and profitable pastime.

As in everything else, some thought should be given to the future, when you are making a selec-



Attractively jacketed in an insulated grey cabinet with black front, complete with plenum chamber, this new winter air conditioner is ideally suited for the small home.

KNOW FIREPLACE FACTS

HOW to design, specify, build for fullest fireplace satisfaction, securing maximum heat with freedom from smoke nuisance. . . . The Donley Book of Successful Fireplaces (ninth edition) brings you more than 200 photos, designs, sketches, illustrating fireplaces and features of construction. . . . Learn how the Donley Heatsaver Unit provides a complete heating system for your low cost home . . . how an Outdoor Fireplace, large or small, adds delight to outdoor premises. . . . This book deals fully with theory and practice of fireplace success—how to equip, operate and repair. . . . Interesting outline of fireplace history. This book has guided many hundred thousand home owners over a period of a quarter century. . . . It is issued by the Donley Brothers Co., makers of a great variety of home conveniences and building specialties. Cut out, fill and mail coupon today with indicated price and receive this 64 page book by return mail.

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Enclosed find 25 cents (35 cents in Canada) for which mail me a copy of The Donley Book of Successful Fireplaces, 9th edition.

Name .....

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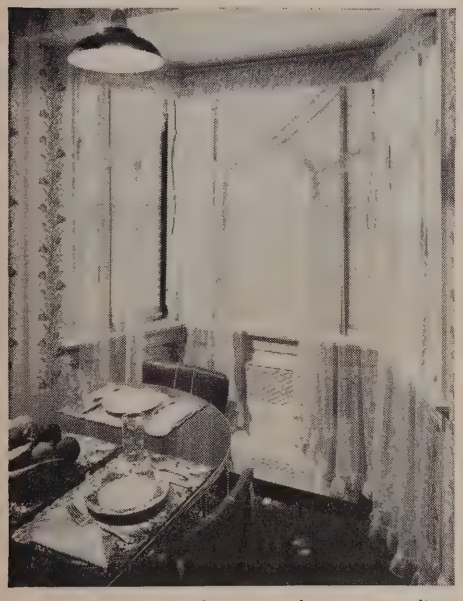
tion of heating equipment. Suppose that at some later time you should decide to build an addition to your house. It will have to be heated. Suppose that the present boiler is ample for the original structure but not large enough to take care of the new rooms or wing. There are many types of boilers on the market that make provision for an increase in capacity as required. If you have any idea that you might want it some day, provide for it now.

The new metal cellar door assemblies which have appeared on the market fill a need for those who have been wondering about the fact that they have but one exit from the cellar. The safety factor is increased by a direct outdoor exit from the basement.



This streamlined radiator sends active radiant heat from top, front and sides, while convected heat pours from the upper grille to ward off cold drafts from the window.

Automatic Control

Your heating plant is automatic when your coal is fed in by a stoker, or your oil is sprayed, or gas turned on mechanically. The operation is regulated by a thermostat which starts the apparatus in action when the temperature falls below a certain point, and stops it when the temperature has risen to where you want it. These thermostats are actually the brains of the heating systems, inasmuch as they detect the need of heat, and relay the message to the boiler. There are a number of facts that the prospective home owner should know about them. The

NOW! CHRYSLER AIRTEMP OFFERS AUTOMATIC HEAT

A comfortable, warm home at the touch of your finger! Just set the thermostat and have exactly the temperature you want all winter long.

SPECIALLY DESIGNED FOR HOMES UNDER $5000

COSTS NO MORE THAN A HAND-FIRED FURNACE!
(Either Oil or Gas Fuel)

Decide right now that when you build your new home you will have modern, automatic heat! Why not? It now costs no more than an old-fashioned hand-fired furnace! And it banishes forever the drudgery of building fires, shoveling coal, carrying out ashes! Airtemp Division of Chrysler Corporation offers you low-cost, efficient automatic and air-conditioning furnaces—for either oil or gas—specially designed for the small-home budget. All are warranted by Chrysler Corporation.

No more fires to build!

No more coal to shovel!

No more ashes to carry!

GET THE FACTS ON MODERN HOME HEATING!

Don't put up with dirt—dust—and drudgery—when automatic heat costs you no more! Why you can even *air condition* your home every winter for only a few dollars a year extra. Automatic heat means a cleaner, healthier home, more pleasant to live in—easier to sell or rent. Air conditioning means clean, filtered air, properly moistened, warmed and gently circulated. Send the coupon below for *free* duct-work plan to fit any one of the twelve featured homes in this issue of Small Homes Yearbook. We will also send you *free* a valuable booklet entitled "Facts on Small Home Heating", which every new home builder should have.

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AIRTEMP DIVISION, CHRYSLER CORPORATION • DAYTON, OHIO

Send for Free Heating Plan and Booklet "Facts on Small Home Heating"

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GENTLEMEN:

Please send me **FREE** duct-work plan for Small Homes Yearbook House Design No. _____ and **FREE** booklet "Facts on Small Home Heating".

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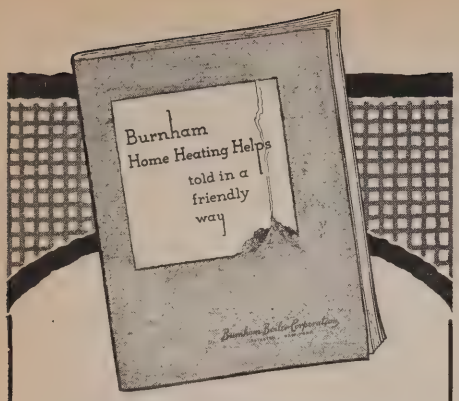

Better Heating
for Less Money

If you are building a home.
If you are remodeling your old one.
If you are in need of a boiler.
If you want the latest design in radiators.
Then send for this free book called "Home Heating Helps." Nothing technical about it at all. Just a bit of friendly assistance to help you have better heating for less money. Has several pages of questions and answers, you'll find particularly valuable. Send for it. Use coupon, please.

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Please send me copy of
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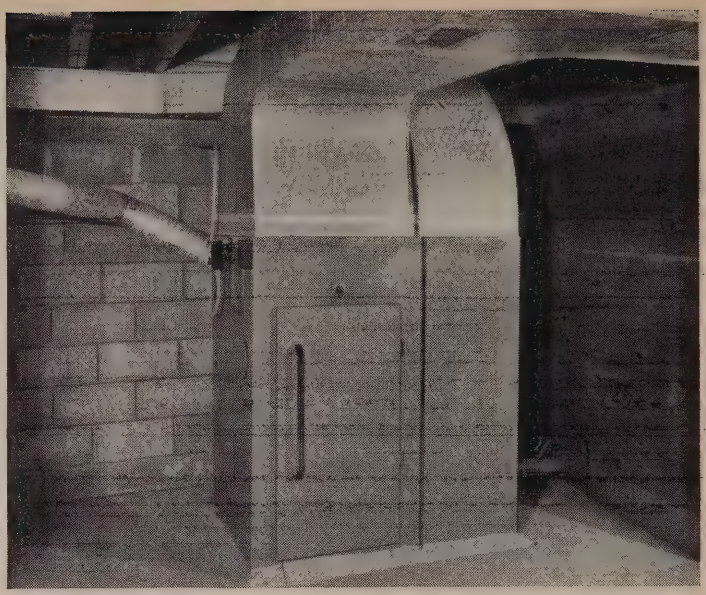
HEATING . . .



Air conditioning for the small home is now efficient and economical through the use of the unit above which warms, cleans, moistens and circulates the air.

main thing is the fact that the best of them cost but little more than the inferior ones.

A thermostat that is supersensitive and that will react to a few degrees drop in temperature, causes a heating plant to go on and off too rapidly, and creates just enough heat to satisfy its own immediate needs, and never permits the house as a whole to become properly heated. On the other hand, a thermostat can be deficient in calling for the "on" periods of heating, to such a degree as to produce what is generally known as "the cold 70." This means that the area immediately above the floor has become uncomfortably cold, while the upper strata of air in the room is still reasonably warm. Modern thermostats will maintain an even, pre-determined temperature throughout the house by regulating the operation of the heating plant so as to produce an even condition of warmth in all parts of it.

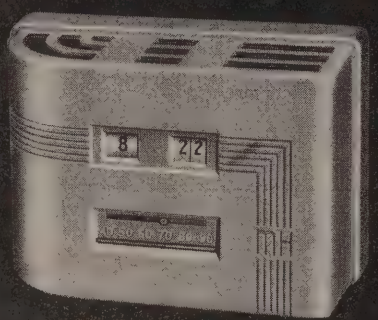
The part that the thermostat plays at night is very important. Actual tests made over a number of years prove that a clock thermostat that will reduce the night temperature properly, and start it up again in the morning, will save as much as fifteen percent of the fuel bill during a normal heating season.

Humidity controls detect the need of moisture in the air, and relay the message to the air-conditioning apparatus. Low-water cut-offs shut off the heating apparatus when water in the steam boiler has fallen too low. In fact the entire operation of the heating system and the comfort of the house can be controlled by mechanical brains from one end of the year to the other if you so desire.

IT'S THE **CONTROLS** THAT MAKE AUTOMATIC HEATING AUTOMATIC

Be Sure...

your automatic heating plant gets every chance to operate at its best. Insist upon complete Minneapolis-Honeywell Controls. They are the accepted standard for the heating industry. Yet despite their superiority, they cost little if any more . . . Your automatic heating dealer can supply them. Play safe . . . . Insist upon Minneapolis-Honeywell Controls. Minneapolis-Honeywell Regulator Company, 2730 Fourth Avenue South . . . Minneapolis, Minnesota.



THE *Chronotherm*

This new M-H Clock Thermostat automatically lowers temperature at night and restores it in the morning. Saves 10% to 30% fuel, yet costs only $18.00 more than a manual thermostat.

Free "A HEATED QUESTION ANSWERED"
Send for your copy of this interesting 20 page booklet about fuel saving with Chronotherm

MINNEAPOLIS-HONEYWELL *Controls*

Modern temperature controls make the heating task effortless.

THE KITCHEN . . .

THE "Show Room" of the modern home is the kitchen! It can be a joy to behold because of its beauty and cheerfulness. It is delightful to work in because modern materials make a perfect background for the really amazing equipment. For example, instead of the old coal stove of our grandmothers' time, ours cooks a whole meal while we are out doing errands!

Small home budgets no longer bar the way to the gay and ultra-smart kitchen which is a paradise of colorful charm and labor-saving cleanliness. It is a compact work-center and probably the most-used room in the home. A recent poll shows that women prefer a large attractive kitchen where they can iron, sew, have space for the children to play, and a desk for their meal-planning. Many families prefer to eat at least one meal a day in the kitchen. There are all kinds of ingenious ideas such as kitchen bars, counters, and breakfast nooks that save much time and effort in the preparation and serving of meals. The kitchen even plays an important part in pleasant social activities — everyone knows and appreciates "kitchen parties" for late evening "snacks". Your local utility companies and many building material dealers have attractive displays that you should see before you build or modernize your kitchen.

This kitchen will stay new looking indefinitely due to the pre-finished wall paneling. The score lines are a nice contrast to the white of the equipment and cabinets. The continuous counter top on this U-shaped kitchen streamlines the whole room. A dining center is shown at the right.

Walls

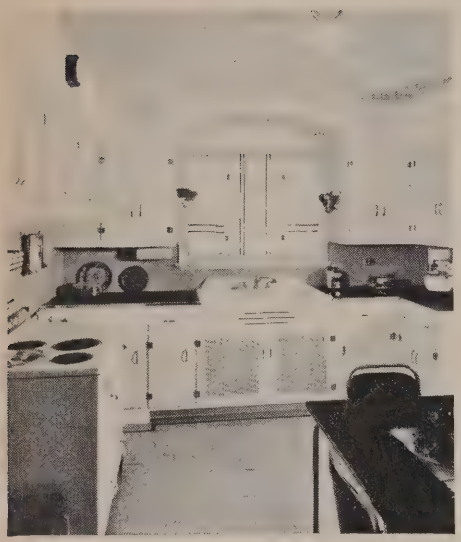
Among the modern materials, pre-finished wall paneling is rapidly winning approval from home planners for its sparkling beauty and practical virtues. It is one of the materials which permit the design of the truly streamlined type of kitchen which surveys show to be predominantly preferred by American women.

One of the beauties of pre-finished wall paneling is that you can get it in various patterns to suit your taste. Providing unbroken wall surfaces, horizontal score lines in contrasting colors (in both pastels and full strength tones) it can be applied to both flat and curved surfaces. Also, contrasting trim colors can be used for working out gay and distinctive effects. On the practical side, it provides the gleaming cleanliness and sanitation you've always wanted in such walls and ceilings. Being pre-finished, these walls keep their "new" sparkle indefinitely and never need refinishing if properly maintained (which is easy). To the budget it is kind in two ways (1) economical first cost and (2) eliminates periodic renovating expense.

Other types of wall surfaces are ceramic tile, structural glass and glass brick, steel tile finished in por-

The breakfast bar and use of glass brick are outstanding features of this U-shaped kitchen. It is a veritable miracle of compactness and yet two people can work in it at the same time without interference.

Note the cabinets around the refrigerator and the attractive dining alcove cut off from the rest of the kitchen by venetian blinds. There is a double sink under the window and plenty of electric appliances.



This patriotic kitchen flaunts red, white and blue colors in attractive combination. It is arranged in the broken U-type, with the sink as the focal point.

celain enamel, linoleum, wallpaper and painted plaster walls. These all have the virtues of attractive colors and high sanitary values.

Floor Coverings

Floor coverings for kitchens are usually of rubber or linoleum. Both of these materials are produced in attractive colors and give excellent service. They have resilience so that you do not tire standing or walking on them as quickly as on a hard surface. They are easy to keep clean.

Planning the Arrangement of Equipment

Just how this modern kitchen is planned to save all unnecessary steps is very simple. The kitchen is divided into *three* principal *work centers,* built around the major pieces of equipment. These centers are:

1. *The Preservation and Storage Center*—built around the refrigerator.
2. *The Preparation and Cleaning Center*—built around the sink.
3. *The Cooking and Serving Center*—built around the stove.

Each of these *centers* can stand as a complete unit in itself but their relationship is important.

The Preservation and Storage Center

The *Preservation and Storage Center* should consist of a refrigerator and preparation counter with cabinets above and below, thus correlating all food storage and preparation. The refrigerator placed in the back entry or off on a wall to itself (far removed from the work counter) means miles of unnecessary steps every day. Never let the refrigerator stray from the *Preservation and Storage Center,* because all kitchen studies prove that this particular combination of units saves more steps than any other.

Since all food is delivered to the back door, the *Preservation and Storage Center* should be placed near the door so that eggs, vegetables, meats and fruits can be tucked away immediately.

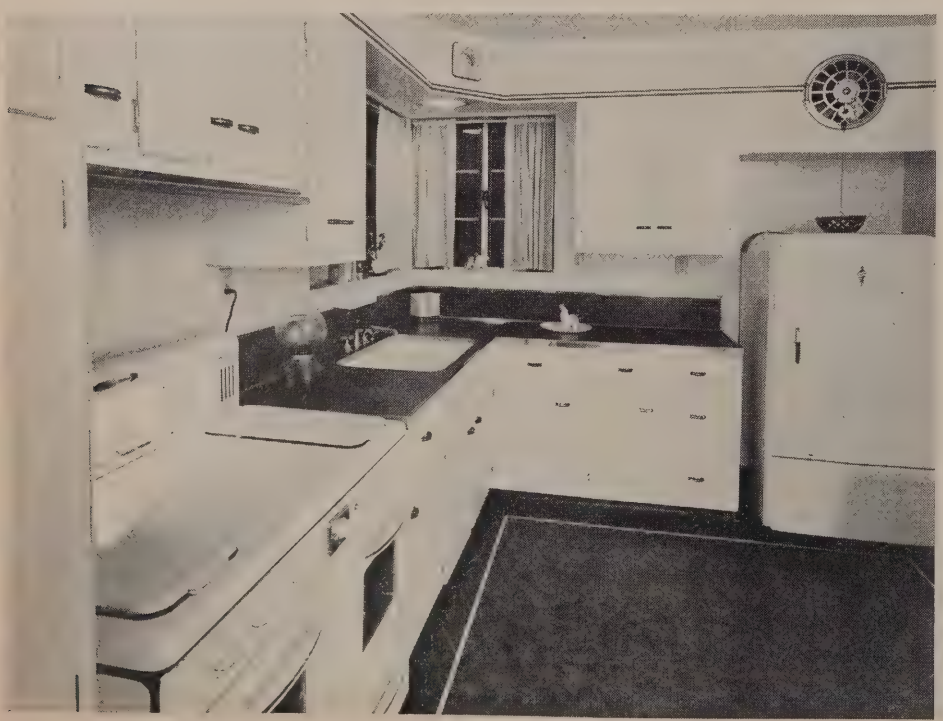
Here is a defense worker with his family in the kitchen of their new home in Fort Knox, Kentucky. There is a place for eating and even the baby's highchair.

A cabinet above the refrigerator can accommodate all canned fruits, jellies and jams. The cabinet next to refrigerator (below the counter) should have bins for vegetables and fruits, a cutting board and a drawer for mixing equipment. The cabinets above should house the packaged foods, salad dishes, bowls and some glassware.

The Preparation and Cleaning Center

Next to the *Preservation and Storage Center* should be the *Preparation and Cleaning Center,* because water is necessary in the preparation of food. Moreover, it goes without saying that an amazing number of utensils are soiled in the preparation of a meal and it is preferable to be able to dump them right into the sink. In this center should be stored cutlery, strainers, soaps and detergents, silverware, and towels (paper as well as cloth). If possible there should also be storage cupboards close at hand for glassware and china.

The sink, which is the heart of this



An L-shaped kitchen in shades of blue with white cabinets and equipment. The blue is picked up in the inlaid linoleum on the floor, the counter tops, the border above the cabinets and the dotted swiss curtains. Note the ventilating fan, glass panels in the ovens and indirect lighting.

center, should have a dishwasher and a garbage *disposal* unit. The new dishwashers use water far hotter than the hands can stand, washing dishes more thoroughly and easier than any housewife can. Very little drying of dishes is required as the heat from the water almost dries them without the use of a towel. Glassware should be wiped with a linen cloth. The garbage "disposal" equipment eliminates the unpleasant task of picking up trash from the sink.

The size of the sink is a matter of preference, but many housewives choose the double compartment, double drainboard style because of the extra utility features which it offers. The two compartments are an added convenience in dishwashing, or cleaning vegetables. A small retractable hose with a plastic handle that protects the housewife's fingers when the water runs scalding hot is another asset. A flat ledge at the back of the sink is a safety perch for delicate glassware. Then, too, there is the four-inch splashback on the sink which enables the housewife to locate it under a window which is preferred. Gleaming cast iron with an acid-resisting finish (which will withstand ordinary household acids) is inexpensive and beautiful. Porcelain (an all-clay material) sinks may be had in white or any color you wish. Rustproof metal sinks are available. While these are more expensive they are well worth the additional cost.

The Cooking and Serving Center

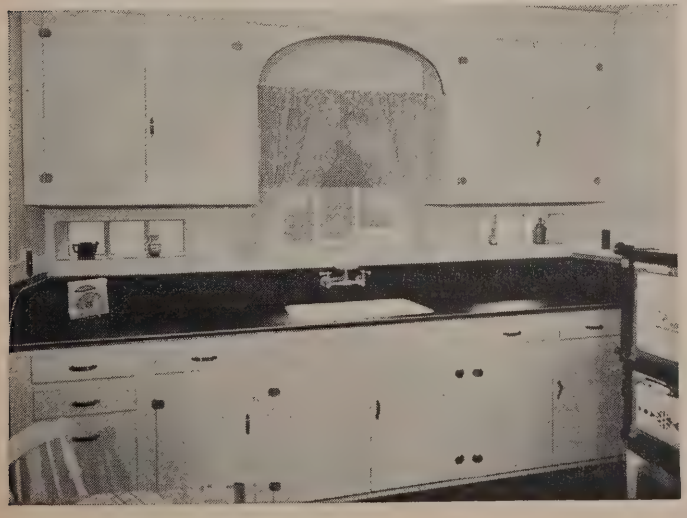
This is naturally built around the stove! Logically, this *center* should be placed as near the door to the dining room as possible, so that food can be served piping hot. Following the principle of storing things where they are first needed, around the stove we would keep pots, pans and cooking tools; serving dishes, and condiments.

Modern ranges (gas or electric) practically perform miracles! The double-oven type can bake desserts at one temperature while baking an oven dinner in the other compartment at different temperatures or roasting meat at 325-350 degrees (one of the fairly recent culinary tricks to reduce shrinkage and insure a juicy full-bodied roast). The glass panel in the oven is a boon to all women constitutionally addicted to peering, since continual opening of the oven door changes the temperature and is said to be one of the most common causes of baking disappointments.

The Shape

The ideal kitchen links these three *centers* together with cabinets to a U or L shaped form. In the U form the refrigerator is on the side nearest the back door. The sink-dishwasher is at the dead end of the U (under a window). The range is opposite the refrigerator next to the dining room door. In the L plan the same sequences follow and the fourth corner of the kitchen becomes a planning or an eating center.

A kitchen should be at least of a size 8 x 12 feet. If more than one person is to work in the kitchen, a room 10′ x 14′, or even 14′ x 16′, is



Note how the glass blocks throw diffused light onto the work top and at the same time enliven this kitchen's appearance.

FOR SMALL HOME BATHROOMS COSTS LITTLE WITH Marlite

Walls of colorful, sparkling Marlite will make your bathroom seem larger—gayer—downright luxurious. Extremely practical too, Marlite is low in first cost, never needs refinishing. Its glass-smooth surface is amazingly easy to keep spic and span. Unmatched range of colors and patterns for working out your own ideas. Send coupon for helpful color suggestions.

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Acknowledgment

For editorial cooperation in the preparation of this edition of SMALL HOMES GUIDE is gratefully made to the following organizations:

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desirable. In a kitchen of the last size it is possible to include an eating center and a planning center. These are two very desirable units. The farm kitchen should be large enough to prepare meals and the milk, canning, butchering, pickling, and other necessary farm manufacturing. Such a room will have a lot of waste motion involved in clearing the kitchen for a job of farm work and then clearing up the farm work to make way for cooking.

Choose Your Colors

You can make your kitchen a pleasant workroom. Choose a color scheme that becomes you, one that will flatter your hair and complexion. White is considered the best color for the more permanent equipment; it harmonizes with any color scheme.

Start with the floor. Select a linoleum or rubber tile pattern to suit your chosen color and one that will permit you to change your color schemes from time to time. Plaids, checks and simple marbleized patterns are safe choices for the floor as they allow you to use a wide range of colors in the rest of the room.

Your walls must be washable. There are fascinating washable wallpapers with quaint patterns that give a lovely effect to both kitchen and breakfast room. Boardtile, structural glass, ceramic tile, dull fabric wall covering, or linoleum are other suggestions. Painted surfaces are also washable.

Colorful curtains can come from the dress-goods counters, where you will find a wide selections of ginghams, cotton voiles, scrim, net, and organdy. Colorful tie-backs and valances or oilcloth give a home-like effect.

Use color daringly in your kitchen —and be original.

Cabinets and Work Surfaces

Cabinets are made of either steel or wood. A few years ago they were all made to order, but the wide demand has resulted in cabinets to fill any kitchen space, at much saving in expense. The base cabinets are usually 36″ in height, allowing 4-inch toe space underneath and a work top 1½ inches thick. Closed cabinets are desirable to fill the upper wall spaces over working surfaces and over the refrigerator.

Counter tops of several different materials are available, such as porcelain enamel, monel metal, stainless steel, linoleum, formica, micarta, presdwood, and of wood (usually maple, birch or ash). Any of these materials provide a satisfactory counter top which can be easily cleaned.

A logical arrangement of the kitchen saves space and the time and energy of the housewife every day that she uses the kitchen. Plan carefully before your contractor starts to build. This way you can insure the economy and utility you must have, and the beauty that you greatly desire!

PROTECTION . . .

(Continued from page 260)

Vacuum-cleaners, electric fans, stoves, gas-ranges, locks and bolts, lamps, and the hundred and one other items of equipment that are in every day use, should be put in proper working order to insure their continued usefulness, and do away with the necessity of replacing them, or the inconvenience of not being able to replace them.

When we speak of weather as a destroyer of homes, a lot of ground is covered with one word. The most damaging weather is the wet and damp variety, that soaks the exterior of the house, and worms its way into every crack and crevice that it can find.

The waterproofed building paper (sometimes copper-clad) that covers the wood sheathing of the walls, or the moisture resistant finish of structural insulating board, are further protections against dampness and decay within the wall structure. Flashings that deflect the down-pour of water and shed it away from openings are additional safe-guards. The gutters and down-spouts that collect the roof drainage, and lead it away from the house, do their part as protectors only if they are properly made and installed. Down-spouts should always be made of corrugated material so that they can expand, if they become choked with ice.

BATHROOMS . . .

NOT so long ago small home bathrooms were pretty ordinary affairs. They received scant attention and usually included only the essential conveniences and decorations. Limited budgets left but little choice. But manufacturers of modern materials and equipment have worked some wonderful improvements in this important room. Now the bathroom in the budget cottage can and does look as smart and modern as the one in the high-priced mansion.

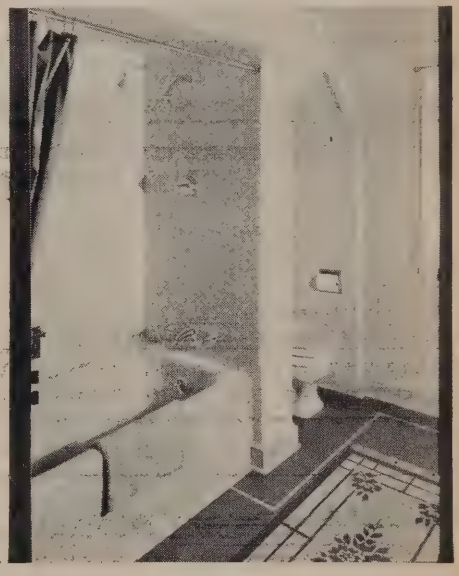
The actual laying-out or planning of the bathroom consists mainly of locating the basic fixtures; the tub, bowl and lavatory in the positions where they will afford the maximum of comfort to the household, and at the same time be economical to connect to the plumbing system. In this connection, it should be borne in mind that the bowl should be located so as to connect into the stack or large vertical drain that runs down to the basement, without having to cross under the floor of the room. The waste connections from the tub and lavatory are small in comparison and they can be run under the floor without danger of weakening the floor joists.

The lavatory is the most attractive fixture and should have a preferred position just opposite the door of the bathroom. It can be made of gleaming cast iron enameled ware or the lustrous, and more expensive, vitreous china. It is a graceful fixture which lends itself in the wall hung styles to the bathroom that is small. For the roomier bathroom the lavatories with chromium-plated legs or smart pedestals are popular. In addition to their beauty, lavatories offer utility features that the old-style designs lacked. Shelf-backs and flat surfaces around the bowl provide room for toilet articles; the design of the bowl at front allows room for head and elbows; integral self draining soap dishes do away with unhandy accessories.

The tub is low, with a wide bottom and wide outer rim for safety's sake, and at the same time it takes the beauty prize from the old-style tub on legs that worked a hardship on the housewife who had to clean under and behind it. Don't place the bathtub under a window. There are drafts, you know,—soot and dirt seep through windows, and in addition, it is a temptation for the man putting up screens or storm windows to stand in the bathtub with his shoes on. The scratches on your tub won't wash off.

Put the water closet in the most private position. Just behind the open door is one suggestion. Or if space permits, conceal it by a separate compartment or a low wall or partition. The outer side can be used for an additional mirror or shelf on which to place toilet articles. You can select closet bowls today that

The lavatory is the first fixture the guest sees. The closet gains semi-privacy behind the door. The rim on the bathtub is a convenient seat.



The placing of the closet in a separate compartment adds a touch of distinction to this bathroom. The shower is economically equipped.

Blue wallpaper with a feathery white motif and darker blue linoleum, peach-colored fixtures, and a peach and white striped dressing table and stool make this powder room distinctly feminine.

Here is a very practical application of pre-finished wall paneling in a small bathroom. The color is powder blue. Also note the cap moulding and framing for the glass-brick window.

Here is a "before" view of wasted attic space that has been used solely for storage purposes.

The "after" view of this attic reveals this modern bathroom. The floor is of inlaid linoleum with a border of black and a feature strip of canary yellow. The walls also are covered with linoleum.

are practically noiseless, and which are equipped with low tanks.

All three fixtures may be purchased in sets that match in design and color, too, if you wish. Many prefer to buy white fixtures and make their bathroom colorful and distinctive by the use of unusual wall and floor material.

Your BATH should have Distinctive Douglas FIXTURES

Today's bathrooms demand Beauty, Utility, and Convenience. DOUGLAS fixtures combine these essential requirements with true economy. They are available in many designs, sizes and colors. DOUGLAS fixtures combine quality of material, quality of finish, and quality of appearance—**built to last a lifetime.** Your DOUGLAS dealer will be pleased to show you the DOUGLAS line and give you all estimates.

THE JOHN DOUGLAS COMPANY
CINCINNATI **OHIO**

Bathroom cabinets are more attractive today than they have ever been. Even triple mirror arrangement with indirect lighting have been added for utility and decoration. If it can possibly be arranged, two cabinets should be installed in each bathroom.

The Floors and Walls

Tile, linoleum or rubber are proper for floor covering. One material is unusually suitable for the walls. It is pre-finished wall paneling shown in some of the bathrooms displayed in the section. It is economical and literally brings "jewel box" luxury to the bathroom. Its slight additional cost over ordinary walls is more than made up by virtue of the fact that it never needs refinishing. Other wall materials are tile, structural glass, linoleum, rubber, washable wallpaper or painted walls. A revolutionary manufacturing process now makes it possible to nail structural glass into position. These prefabricated panels consist of slabs of sparkling colorful glass applied to a plasterboard in such a manner that a flange is left around the edges of the glass. Three panels fit around the tub and no moulding is required as the glass panels fit flush with the rest of the wall surface.

The Powder Room

The addition of a powder room is not as expensive as most people imagine—but it is the greatest boon to the housewife and especially the mother of small children. It is step-saving, work-saving, temper-saving!

The design of the average two-story house will permit the installation of this room under the stairway. It should be located at the rear, accessible from the front rooms and from the back rooms through a hallway. As little as 3½ by 4½ feet of space is enough area.

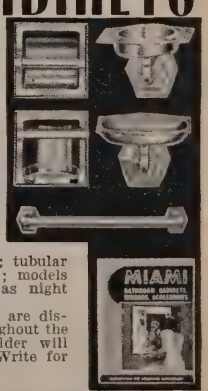
Make this room as gay and colorful as you can. Dainty towels, soap and other accessories should complement your wall and floor decoration and the fixtures themselves.

Make your bathroom the "Show Room" of your home with

MIAMI CABINETS

and

ACCESSORIES

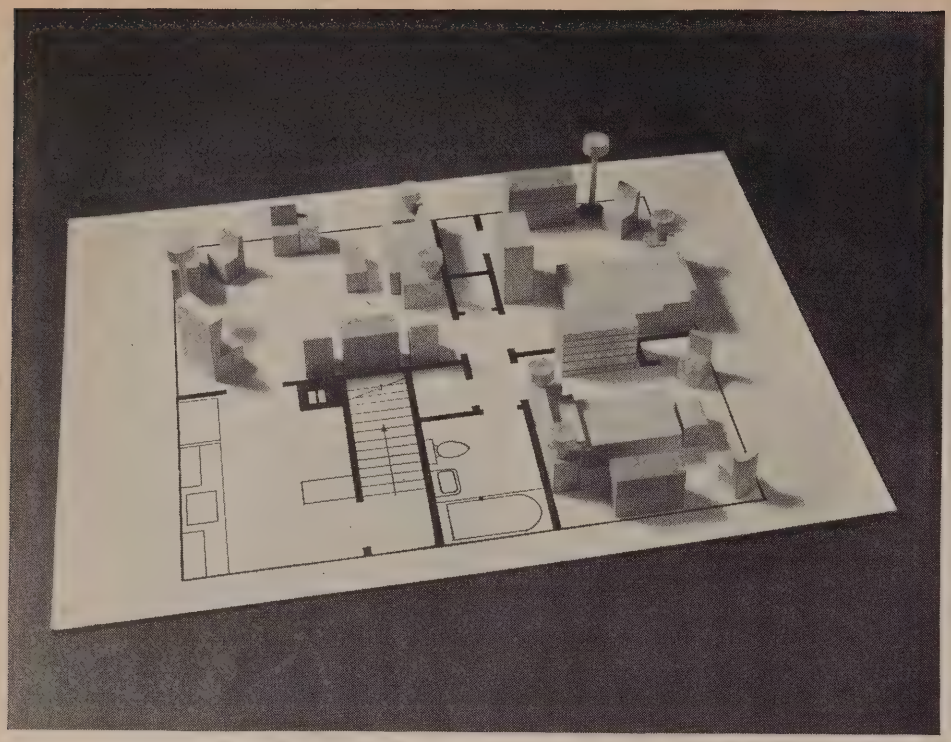


A MIAMI Cabinet—dollar for dollar of cost—can do more to produce the effect of beauty and luxury than any other detail of bathroom equipment. MIAMI Cabinets are distinguished by their superior quality and originality. They offer more convenience features—a wider selection of styles. Over 140 distinctive models; glamorous creations with plate glass mirrors and rich chrome frames; tubular lighted models, wired at factory; models with interior light that serves as night light.

MIAMI Cabinets and Accessories are displayed by many distributors throughout the country. Your architect or builder will help you make your selection. Write for illustrated MIAMI booklet.

MIAMI CABINET DIVISION
THE PHILIP CAREY MFG. COMPANY - MIDDLETOWN, OHIO

Planning the interior of your home is one of the most interesting experiences of your lifetime. We are giving you practical suggestions for buying furniture, planning your color scheme and visualizing your whole home even before you start to build! You can study each room, deciding on the location of the furniture you already have and seeing exactly how much more will be needed by using the new Plan-A-Room method described. It is a fascinating way to decorative charm.



Here is a floor plan for a typical one-story defense home showing the furniture arrangement by Paul R. MacAlister by means of the Plan-A-Room models. This shows you exactly how much space the furniture takes up and what furniture you will need for any room you want to furnish, in 18th Century, Early American or Modern.

YOU BEGIN WITH THE FLOOR PLAN

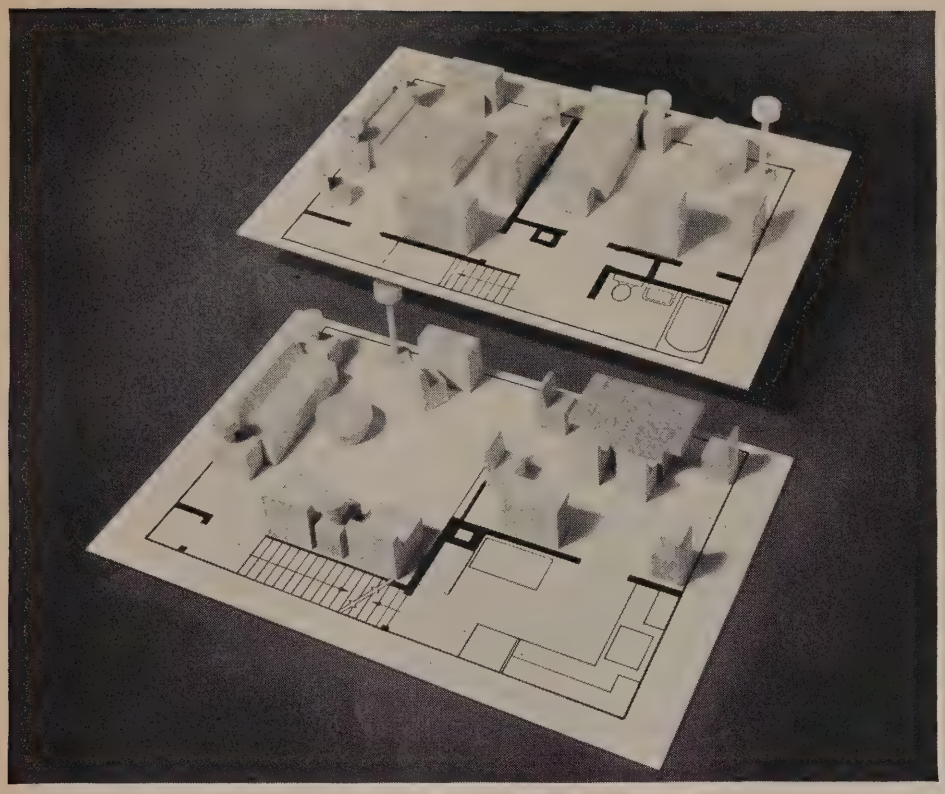
by Martha Wood
FEATURE EDITOR

DON'T be a "moving day decorator!" Those who come under this heading invariably arrive at their new abode with a disorganized medley of van and family and a resulting state of complete confusion. You've spent months on planning the exterior architecture, but were sure that the interior decoration would take care of itself. Well, this is a fallacy to be avoided at all risks, and right here and now we're going to lay out for you the easiest plan of attack on making your new home a livable one—one that will contain the fundamental decorative assets which you and your entire family will enjoy.

Step No. 1 is to acquire blueprints while this home is still under construction. We suggest that you have these made up at one-half inch to the foot for better legibility. Don't let these "formidable sheets of line after line" throw you off balance because you will find that they are as easy to read as a good novel once you've looked them over carefully. Acquaint yourself with them thoroughly, so that you're sure of all room dimensions and architectural features. The floor plans shown on these pages are those of typical Defense Housing projects, but generally apply to almost any small home. It's necessary to "know your blueprint" before we arrive at step No. 2. And here we really have the back- and budget-saver of all time!

The name of this ingenious gadget is PLAN-A-ROOM, and it was invented and designed by one of the country's leading decorators—Paul R. MacAlister. We feel that PLAN-A-ROOM is a sure-cure for all decorative ills. It consists of 76 miniature wooden furniture symbols representing pieces for almost every room in the house. You'll also find cardboard walls and carpets of the most popular color tones. However, one of the most important items in this fascinating kit is a small grooved planning board on which every square equals one foot. Everything belonging to PLAN-A-ROOM is scaled at one-half inch to the foot so that no ruler is needed and no mistake can be made in proportion. All you need do is count off the room dimensions on the planning board, insert the cardboard walls to enclose the specified area, cut the carpet to correct size, and then dive in after the symbols representing the furniture you want in your home. When these are placed to your satisfaction, the problem of color schemes can be taken up. There are two or three ways of introducing color in your PLAN-A-ROOM set-ups. (An example of one of these decorated set-ups may be seen on the following page.) One is to cut up magazine ads and illustrations and paste your favorite ones over the furniture symbols. This way you will see in advance just what proportion of color you will have, provided you follow out this scheme on the actual pieces. Just *think* of the *money* you'll save by these experiments in miniature! A more accurate method is to paint the symbols with poster paint which readily washes off thereby giving you the opportunity of carrying out that "if at first you don't succeed" slogan. The third and most reassuring method is to collect small cuttings of your favorite fabrics and paste these on the symbols. Just between you and me, even after you've hit on the decorative scheme you want to use, you will have had so much fun with PLAN-A-ROOM that you'll be helping all your friends with their problems! It's a perfect way to crystal-ball gaze into your new home! A PLAN-A-ROOM kit will be delivered right to your door in record time, if you just use the coupon on page 285.

But now to get back to step No. 2. You will note in the accompanying photograph that this is to place the PLAN-A-ROOM symbols on your own blueprints so that you will know weeks ahead of time just where each piece is to be located and exactly how much furniture you are going to need. By planning the interiors of your home before construction starts, many costly mistakes can be avoided, and rather than straining the back of the family



A typical two-story defense home floor plan shows the furniture arrangement for both floors. The rooms without furniture symbols are the kitchen and bathroom. The principles of furniture arrangement illustrated here apply to any home.

bread-winner with the actual pieces, you can have hours of entertainment deciding all this in advance by yourself. You will get a true bird's-eye view of the real thing. And, believe me, on the day that you move into your new home, your family will think you're a veritable genius for having such decorative foresight!

But now you are undoubtedly saying: "It's fine to have these things to work with, but how am I to know just what good furniture arrangement is?" Well, Mr. MacAlister has given us what he considers ten of the most basic rules for home decoration, and here they are as he told them to us:

1. Be sure that every piece of furniture performs a functional purpose.

2. Your floor covering should be, preferably, wall-to-wall, or else allow not more than a narrow margin of approximately one foot from each wall. Otherwise, the room will appear much smaller.

3. Decorate your rooms and enhance their charm with correctly placed mirrors. There is no better way to enlarge an interior.

4. Use light effectively. It is one of our greatest decorative mediums.

5. Don't "just hang" your draperies, but study each window for its decorative possibilities, and let in all the light you can. That's what our windows are for!

6. Let the accessories express your personality. Every homemaker should select her own.

7. To place every piece of furniture on an angle leads to confusion. If a piece can be parallel to a wall—put it that way!

8. Don't have your entire house either papered or painted, but combine these two mediums for interesting effects.

9. For good living room furniture arrangement have at least the following three groupings:

a) A conversational grouping
b) A designated space for writing
c) A reading corner

And in a room large enough to include it, a table should be set up permanently for card games.

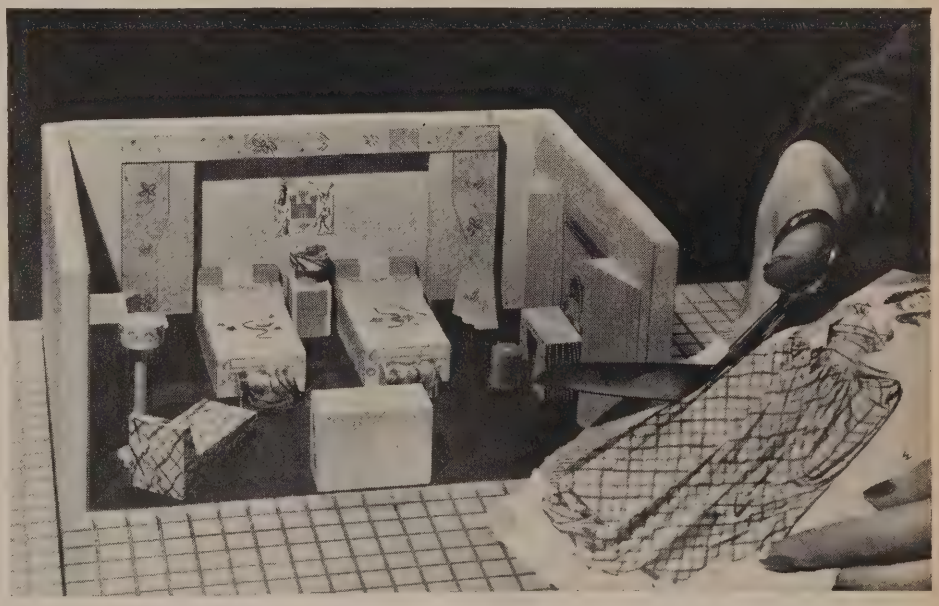
10. William Morris, a famous English artist and writer, once gave the Golden Rule for all good decoration. He said: "Have nothing in your home that you do not know to be useful, or believe to be beautiful."

But now that you have this thumb nail list of "do's" and "don'ts" which you can save for future reference, let's take up these rules in more comprehensive detail.

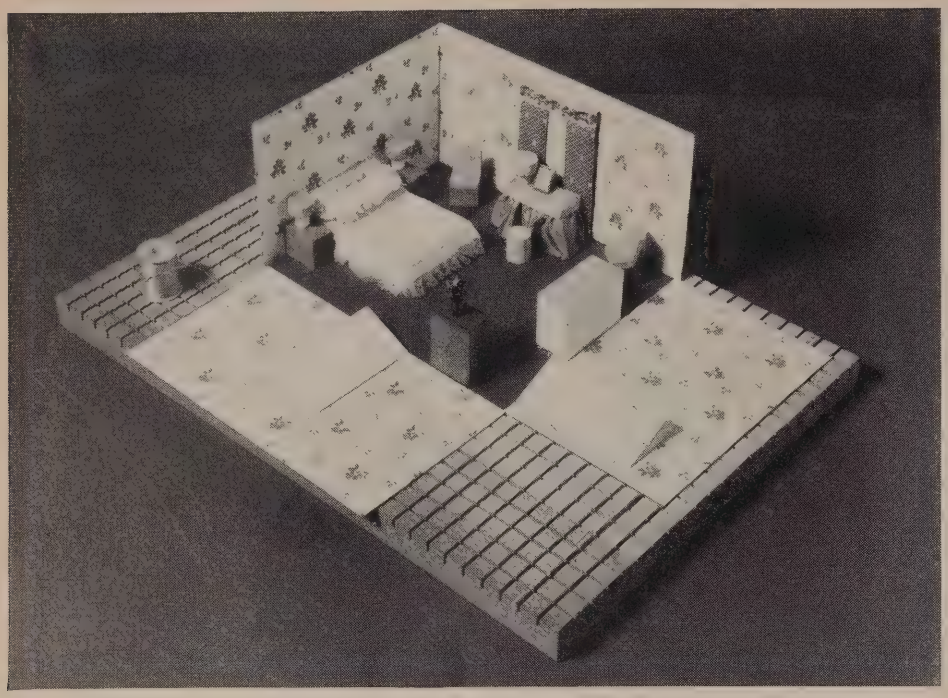
In Rule No. 1 Mr. MacAlister stated that every piece of furniture must perform a "functional purpose." In other words, never have a table or chair, etc. which is not enacting some specific duty. If you don't actually need a piece where it is—then either move it or don't have it at all. And *never* let yourself fall into the habit of buying something just because it's the most adorable little piece you've ever seen. Take our word for it that it won't be nearly as adorable when it comes in and crowds your room out of the simplicity it should have!

Floor Covering

The question of carpeting, or "Underfoot Comfort" is an essentially im-



When the furniture symbols are placed to your satisfaction, you can get an idea of color combinations by cutting up colored magazine ads and pasting over the furniture. This charming, dainty pink and blue bedroom is just being finished. Note the chaise-longue covering is from the skirt being cut at the left.



Wallpaper with pink and blue roses on a white background and a soft blue carpet are used in this charming bedroom. The drapery is lighter blue than the carpet and is trimmed with white lace. The valance is pink and white. The bedspread is white net with pink sateen underspread. The dressing table is in two tones of pink taffeta and the chairs are glazed chintz.

portant one. As stated in Rule No. 2, wall-to-wall carpeting is the only way in which to assure your room of appearing as large as possible. Furthermore, it lightens the burden of cleaning and makes it feasible for you to place chairs and tables near the wall without making them look as though they might tip over. However, if you do have rugs, be sure that they are anchored down so that your guests do not arrive in your house wrong side up! As for rug pattern, a plain broadloom is the safest, because, with this as a basis, you can delve into all the chintzes, stripes or polka dots you want without worrying about their interference with a carpet pattern.

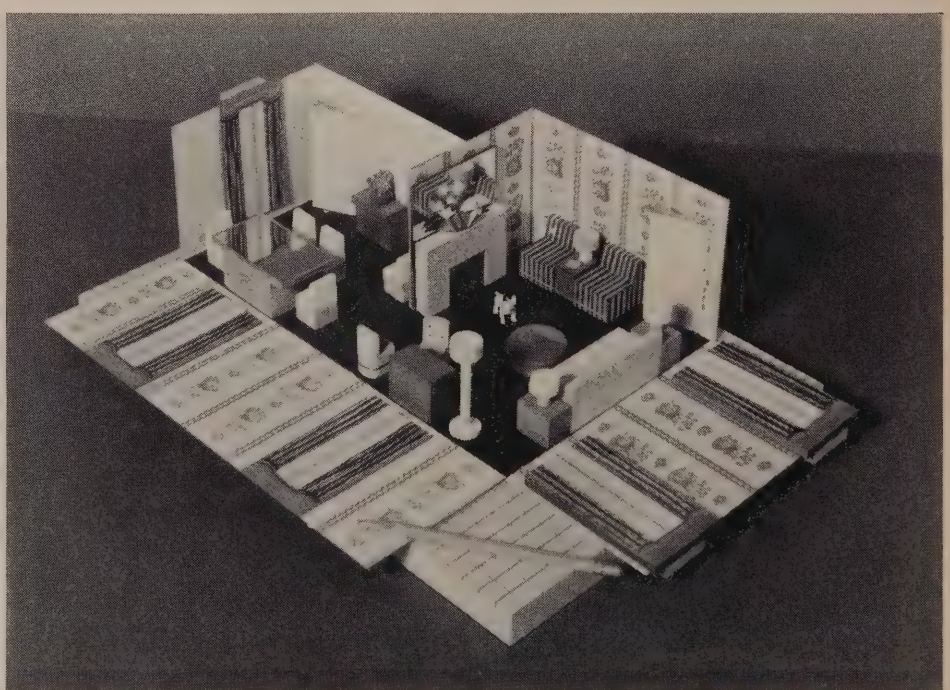
Floor coverings set the pace for your rooms. Think of them as forming the background for your entire setting. Remember that the eye travels downward more naturally than in any other direction.

If your furniture is modern, have the floor covering set it off—and the same with period rooms. You'll find there are definite characteristics that immediately identify a floor covering as either belonging or not. Today there is a wide range of prices and weaves. Your department or furniture store are prepared to go into those phases of floor covering information, and do not be backward in asking about the different qualities and appropriateness of the various weaves. Take advantage too of the numerous color and style charts made available by the floor covering manufacturers. You'll find many helpful suggestions that will save much uncertainty not only in your floor coverings but in your entire ensembling problems. Thus there comes to you the direct assistance of America's most informed color and style decorators!

Mirrors

Who wouldn't love to have a room look twice its size! Well, there's only one way to do this magical trick and that's with the use of mirrors. It's great fun to be able to "open up the seams" of a room, and you'll lift it right out of mediocrity into something as outstanding and cheerful as a Parisian hat. If your sofa is opposite a fireplace, then hang a good-sized mirror over this sofa and you'll be able to catch reflections of the firelight. Could you ask for a lovelier picture than that? You can also bring your outdoors indoors by locating a mirror where it reflects the garden. If you have an oblong or square dining table—butt it against an unframed panel of mirror and you'll have the family thinking they're dining in a baronial hall, to say nothing of the trick flower arrangements you can dream up! Once you start with mirrors you'll find a lot more rabbits in the hat because mirrors are magic in the home.

And while we're on the subject of glass, let us mention here that glass block is a fascinating first of decorative possibilities. With this material, a transparent, but sound-proof partition may be erected at little cost. If friend husband wants his desk away from it all, but you don't want to cut up your living space to accommodate him—well, glass blocks will answer both problems and be, at the same time, a decorative asset. Ask your dealer what



This is a decorative scheme for the living room shown on page 277. The carpet is deep reddish burgundy and the wallpaper is Valley Forge pattern in red and blue. The chairs are red and white stripe and the lounge is light blue brocatelle. The draperies are medium blue with a cross stripe of off white and deep red. The walls in the dining alcove are light blue.

ingenious uses this material has been put to—it's well worth the knowing!

Light

Rule No. 3 stressed the importance of the use of light. It is a "must" in any decorative scheme, and the only way it can be effective is to be well distributed. Now, this does not mean an all-over glare. No, some parts should be rather dim, and this is suggested around the conversation group. But wherever there is a comfortable chair there should be light sufficient for reading. It is quite a trick to distribute your light power so that when the room is all lighted up it will give a pleasing appearance and show off your decoration to its proper advantage as well as being practical. The new fluorescent method of lighting has done a great deal toward creating "eye comfort" and is well worth consideration. Days of glaring lighting are a thing of the past. Today, lighting has been boiled down to a purely functional method. Mood and light-conditioning play the predominating part. Light may now be diffused or intensified at will to fit into the spirit or mood of the occasion. A simple flick of the switch brings either relaxation, gaiety, or romance to any gathering. And don't be afraid to spotlight a particular favorite of yours whether it be a painting or an interesting plant. You might also refer to the lighting article on page 286.

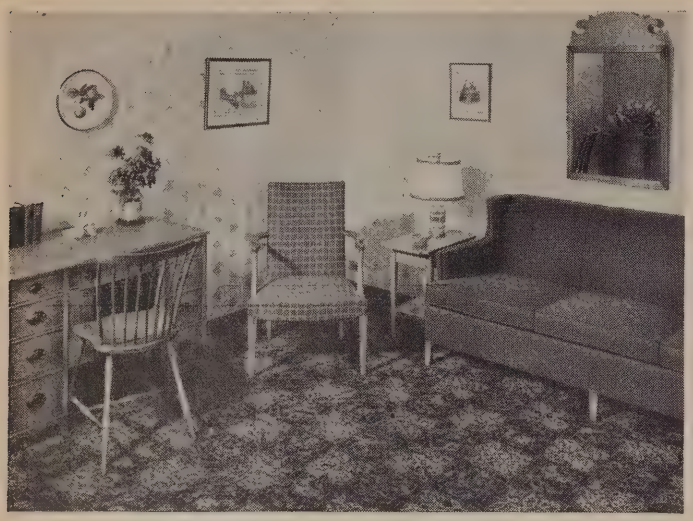
Windows

Back in the beginning of this so-called "decorative era" it was the *dernier cri* to hang every last bit of available fabric over the windows. This meant that, to enjoy a view, one had to go to the window, pull back all these dust collectors, and then, at last, groan with the beauty of it all. But not so today, because the current trend is pulling us along in the opposite direction. Some bright young thing came to the inevitable conclusion that windows must have been made to see out of, and that's one point we want to be sure and make. Draperies are still of great decorative import, but here's the 1941 way of making them assets: Never cover any of the window glass, but start draping your window fabric out on the wall bringing it just inside the window frame. In this way, you can enjoy the full benefit of all the light available, and still have decorative draperies. But now you have established this fact, let's pick up a few of the pointers on *how* to drape this fabric. Here we must study the architectural features of the room. If your ceiling is low then tie back your draperies quite high to change this effect. If your ceiling is high—then tie back your draperies at a fairly low point. In almost every home there are windows to be found which are placed quite closely together. If the space between these windows does not exceed three or four feet you will find that the room will be much less "cut up" if you treat

The wall-to-wall gray carpet permits the use of yellow figured wallpaper. The knee-hole desk in front of the windows is a cheerful place to work. The organdie ruffled curtains are charming in this informal room.

The Oriental rug is a rich background for this 18th Century dining room. The furniture is in correct scale for the room—"it fits" and leaves plenty of room for serving. The wallpaper picks up a mauve from the rug and the chair seats accent it with a rich blue.

This bedroom is in shades of green. The rug is a fern and leaf pattern in tones of green. The wallpaper picks up a pastel tone from the rug. The mahogany furniture (authentic 18th Century reproductions) adds warmth. The woodwork is white and the curtains are ruffled dotted swiss.



An Early American room with maple furniture and a hooked rug pattern for the wall-to-wall carpet is especially well suited for a farm home. It is cheerful and comfortable.

these two units as one. In other words, use only one pair of draperies, and join them with a single valance board. If the old budget allows, you may further enhance this space between the windows by covering it with a sheet of polished plate glass mirror. It's intriguing, so try it if you can!

There is one more feature to draperies that we would like to stress and that is the use of trimmings. This added bit of décor provides the finishing touch and gives all your efforts the professional appearance. Now when it comes to the use of glass curtains in addition to draperies—be careful. Don't forget your grandmother with the dust gathering at her windows! Unless you have an unpleasant view, we would say not to incorporate these. They are essential where there are no over draperies, but superfluous if you have them, and venetian blinds would prove of far greater value. After all, you can open and close these at will, and still be more or less "protected." Their horizontal pattern is a decorative note in the room and they may be pointed any color to harmonize with your color scheme. The tapes may be of contrasting color.

Window shades are no longer a mere matter of utility. The new pastel tones bring a delightful color accent into modern rooms and are just translucent enough to let a faint glow into the room. It is possible to have shades made up in double faced cloth, or to have an outer shade of neutral color so that all shades match from the outside.

Accessories

So much for Rule No. 5, and now that we are up against No. 6, we have something much more intangible because, as Mr. MacAlister said, accessories should be selected by *you*, and you only. Well, there are still a few hints on this subject such as buying accessories *not* with the thought in mind that they are purely accessories, but that they are a definite part of your decorative scheme. Lamps should be chosen carefully to fit in with the period of your furniture, ash trays (man-size ones) should be in abundance as well as lighters or attractive match boxes. Try, also, to bring in a touch of the "different" in your accessories. Dainty hanging shelves, a charming screen and wall scenes will create an atmosphere of originality. If you have a definite hobby, introduce a suggestion of it, so that your friends will be conscious of your interests, and in this way your home will always be a charming spot of individual décor.

Furniture Arrangement

Back in the dark ages when heating systems weren't up to any kind of snuff at all, there was a great decorative surge toward "cozy corners" in order for the family to keep warm as of a chilly evening. Consequently, this necessitated having most of the chairs at angles. However, times have changed radically, and Rule No. 7 is purely to stress the point that when most of the furniture is at angles, the room becomes "busy" and circulation space divided by two. Since we no longer need to go into a huddle to keep warm, let's spread out and put only a chair or table at an angle where it is absolutely necessary.

Walls

The question of paint and paper brings us along to Rule No. 8 and presents an opportunity for a grand stretch of the imagination! For instance, just because you want to paint one room, don't feel that you have to do likewise all over the house. Variety is

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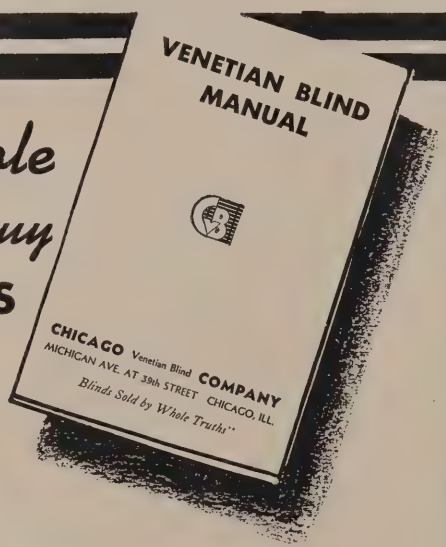
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the spice of life, and especially of decoration. So let yourself go because there are an infinite number of inexpensive but lovely wallpapers on the market. If you haven't seen those which simulate wood grains—look them up, because they are getting better and better every day. For the more daring of heart there is the irresistible trick of papering one wall and painting the other three. Another is to paint one wall one shade and the other three a deeper or lighter shade according to your preference. And, don't forget panelling—the very backbone of interior architecture since way back when! Panelling is one of the invincible methods of creating charm. It's masculine, it's feminine, it's unbeatable!

Essential Groups

Rule No. 9 gives us the three most important groupings to be included for living room arrangement, and they are essential. Your conversational grouping should consist of at least a sofa and two armchairs. If you have a fireplace, a very nice method of placing three pieces is to have the sofa opposite the fireplace with the two chairs (preferably pairs) facing each other and flanking the fireplace. End tables should be available for the chairs and a coffee table in front of the lounge.

When it comes to furniture arrangement in the bedroom, be sure that the bed does *not* face the window. This location is not conducive to sleep—in fact it's most annoying! With a double bed there should be a pair of night tables, but with twin beds only one is necessary. When it comes to the decoration of the master bedroom care must be taken that this room is not too feminine. It is the female urge, we know, to lean toward fluffy ruffles, but a very delightful happy medium can be reached and Mr. Homeowner won't feel out of his element.

The tenth and last rule takes complete care of itself, but is one that should be remembered through all the annals of decoration—present or future. It's a sound idea to memorize it.

Living Room-Dining Room

Perhaps the greatest influx in modern architecture is the advent of the living room-dining room, and its decorative solution is a delightful one. The main asset is being able to have what appears to be a large living room which would have to be forfeited in the case of a separate dining room. Do not try and divide these rooms off too much in their decorative feeling. If you carry out one color scheme in both sections, you will find that you have a more expansive amount of livable space. It is wise to have a "portable" dining table which can be pulled out for dining purposes, thereby saving what could be a lot of waste space.

An interesting and comfortable grouping of 18th Century furniture for a reading corner.

Furniture

If you are doing your own buying, it is best to apportion correctly the money to be spent rather than having a hangover of furniture to be bought and not an elastic budget. However, when you do sally forth, you will need the wisdom of Solomon in order to discriminate wisely between good construction and durability versus the bargain price. Provided you are playing the role of decorator, by all means go to your most reputable local dealer even if this means passing up a glorious sale price at some second rate store, because a wise and worthy purchase *always* pays in the long run.

Buying furniture is a careful selective process, but one in which you can find keen pleasure and satisfaction. Harmony and correlation of furniture and appointments is the distinguishing mark of good taste. Furniture manufacturers have made magnificent forward strides in making available better furniture at less cost. Small scale furniture is available for small homes and apartments. (Furniture should fit the space it is to fill as accurately as clothing.) Authentic reproductions of period furniture can be had at moderate prices.

Before you buy any piece of furniture, ask yourself these simple questions: Is it useful? Will it serve the requirements? Is it suitable in style, color and proportion to the room? Is it

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A charming young girl's room is decorated in shades of pink and rose from the flower prints over the beds. The rug is rose colored, the walls and background of the chintz draperies are pink. The furniture is blond.

beautiful? And, does it add to the beauty of the setting?

Unless you have a decorator's advice, it is best to play safe and select woods of the conventional type such as mahogany, oak, walnut, and pine. Rare woods are a precarious proposition for the amateur. Be sure that you have a speaking acquaintance with period furniture (if this is your choice) so that you are not sold simulated Hepplewhite or Sheraton. It is much better to buy simple reproductions of these periods rather than find yourself in a position several years hence of being criticized by "friends" as having bought mongrel, borax furniture.

Sectional pieces are cleverly combined in this light mahogany grouping. The buffet is of two sections, but by its clever design gives the illusion of a three-sectional piece. The rug is two-tone in rosy-wood. The walls are a brilliant brown selected from the picture. The simple white curtains pull across the window.

This is a quiet place to write or study. This Modern room is decorated in shades of tan and brown with a pastel rug, rough textured fabric on the sofa at the left, and blond furniture.

In the selection of modern furniture, you eliminate one of the headaches of your "period sisters"—that of discerning a good reproduction, but you still have to watch out for obvious pitfalls. Since the surfaces of modern pieces are so much plainer and smoother you must be sure that the finish you are considering is a durable one. One that will not scratch or stain too easily. A great many pieces are now being treated with a plastic finish which is invisible but nevertheless impervious to the ordinary stains. This will prove to be of infinite help to you, especially if you have a fun-loving family! As you have undoubtedly noticed, modern furniture has been designed for comfort and symmetry of line. However, beware of buying too many overpowering pieces.

. . . YOU BEGIN WITH THE FLOOR PLAN

Make those large which you need for comfort, but keep a feeling of airiness and lightness by the selection of simple and dainty tables and open armchairs. It is very easy in the buying of modern furniture to acquire an overabundance of pairs. Watch out for this.

Construction or the assemblage of the furniture, is a topic pretty difficult for the layman. It is more or less like law—a little knowledge of which is, if not dangerous, still quite confusing. Furniture construction has undergone so many changes in the past few years, what with the introduction of plastics, new adhesions and multiple machinery equipment that our advice would be not to rely on individual, general knowledge of this subject, but to put your confidence and faith in the store from which you buy your furniture.

Also remember that upholstered furniture can make or break a room, and although the comfort of a chair or sofa should be the first consideration, style is a factor which should also share the limelight. When you select a chair, for instance, sit in it for five minutes or so and be sure that the angle of the back is correct, and the depth of the seat fits you. Then stand off and visualize the style of this chair in your room. The modern trend is toward fairly low backs, the old-fashioned high-backed chairs give a room too overstuffed an appearance. And this applies to both the modern and period styles of furniture.

And so we trust that with (1) your knowledge of floor plans (2) your use of the famed PLAN-A-ROOM kit, and (3) Mr. MacAlister's ten basic rules for decoration you will make your new home the envy of ten counties. Just start planning way ahead of time, experiment to your heart's desire and then when the great day comes, you'll have a grand thrill in seeing all your careful plans gloriously exhibited in the real. How proud you'll be! And your family—well, just wait and see what they'll think of you.

The small furniture is ideal for a child's room. This room, done in blue and ivory, is designed for happy childhood memories. Low shelves with cabinet space below help the child in acquiring the habit of putting away his things.

A comfortable sofa with end tables and coffee table and two arm chairs make up this conversation group in front of the fireplace. The draperies pull across the windows. The color scheme of this room is in shades of tan and brown.

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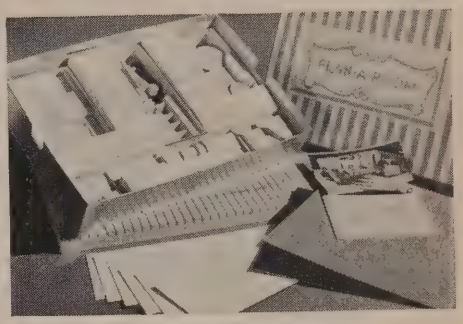

Contents of the PLAN-A-ROOM kit (all scaled ½" to the foot)

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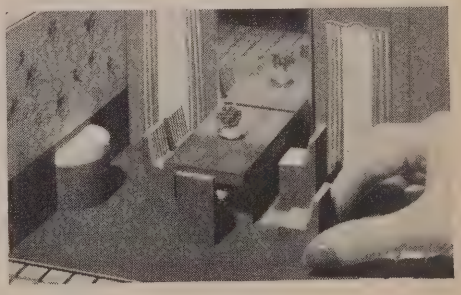

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Too many people overlook the lighting plan until their home is finished. Then they often find changes must be made to give them proper lighting.

Much of the charm, liveableness, and safety of your new home will depend upon its lighting. You want to select fixtures and lamps that harmonize with your furniture and decorations. You want lighting that brings out the true colors of your upholstery, wall paper, and drapes. You want lighting properly arranged so there are no unlighted halls or stairways where you might fall in the dark. And above all you want lighting that makes reading, studying, and sewing easy for the eyes.

Here well-balanced lighting brings out the charm and color of the decorative plan and provides just the right amount of light for every eye task. The soft diffused light from the ceiling fixture chases out unflattering shadows. The lamps provide localized light at the reading chairs and at the desk.

The Lighting System: Every lighting system is composed of four elements, wiring, lighting fixtures, portable lamps, and lamp bulbs. Each element should receive your personal attention, so we will discuss each briefly.

The Wiring System: The wiring system compares with the veins and arteries of your body. Through the wiring flows the electricity which lights the lamps and fixtures and operates your appliances. A good wiring system necessarily must include (1) fixture outlets properly located for good general illumination; (2) convenience outlets located to serve all possible furniture arrangements; (3) switch control of outlets and fixtures so arranged that passage through dark room does not require groping in the dark to find the light switch; and (4) adequate size wire to assure efficient operation of lamps, fixtures, and appliances.

Remember that your contractor does not know all your wiring needs unless you sit down with him and discuss them. Do this now. Go over the wiring layouts with him.

Lighting Fixtures: Most rooms of the home employ general illumination supplied by ceiling and wall fixtures and localized illumination supplied by portable lamps. A lighting fixture serves two functions in nearly every room: to provide surrounding light to soften the effect of the strong local light and to harmonize with and complement the decorative plan. In kitchen, bath, and laundry, the fixture does not require as much styling as in the living room. However, care must be used to see that the fixtures selected provide a pleasant quality of light and the prescribed quantity for good vision.

For the living room, dining room, and bedrooms there is a great demand for highly styled fixtures. In fact there is a tendency on the part of many to buy fixtures that are purely decorative and not good light sources. Today there are many well-designed and well-styled fixtures that meet the requirements for good sight and good appearance. Your contractor has access to fixtures of these types in styles to fit any decorative scheme. Ask to be shown the new Certified fixtures. These have been designed to meet the recommendations of the Illuminating Engineering Society, the same organization that developed the Certified I.E.S.-specification lamps. All certified fixtures bear the tag of Certification of the Electrical Testing Laboratories (ETL).

Budgeting the Cost of Lighting Fixtures: Because the importance of proper fixtures has not been recognized, expenditure for such fixtures unfortunately has been held to ½ of 1% of the total cost of the home. To have properly designed and styled fixtures, a minimum allowance of 1½% of the total home cost should be provided in the budget for fixtures. Such an increase is very small when the benefits are weighed. Eyesight is priceless, good light is cheap. Don't risk eyestrain by economizing on lighting fixtures and lamp bulbs.

Portable Lamps: Except in strictly utilitarian rooms such as the kitchen, bath, and laundry, portable lamps are the most convenient means of providing the local light needed for specific tasks as reading, writing, studying, etc.

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VISUAL MAGIC FOR YOUR NEW HOME

II. The Use of Color for Interior Decorative Schemes

by Howard Ketcham

Color and Design Authority

COLOR can accomplish more for less money toward creating an attractive room than any other single element. For color may indeed be a magic wand. But the wand that changed pumpkins into gilded coaches was equally capable of reversing the process (as Cinderella learned). The loveliest of colors incorrectly used can transform a well-proportioned, well-lighted room into a seemingly cramped, dreary and uninteresting place. This is an indication of how essential it is to measure color in terms of its appropriateness for specific purposes as well as for general attractiveness. Successful decoration depends not so much upon the colors used as the skill with which each is adapted to its own most fitting purpose.

Therefore the most difficult decision to make in furnishing a new home, or in re-furnishing a certain room, is that pertaining to the colors to be used. This applies, of course, to those adventuresome home-makers who wish to create an atmosphere a bit different from thousands of other homes—to reflect and emphasize their own personalities!

What makes the color problem difficult is that the average painter, while an excellent artisan, is not a qualified colorist and cannot discuss expertly the psychological and esthetic values of colors. Indeed, one is lucky to locate a painter who is a sufficient master of his craft to be able to duplicate colors with exactness and dispatch. In buying carpeting, furniture and fabrics one may easily secure much more authentic and helpful style and design information than when considering color for walls, ceilings and floors.

Major Interior Color Problems

In general there are nine color problems that regularly confuse most amateur decorators. They are:

1. How to gain an appearance of force, gaiety, restraint or conventionality through the power of color.
2. How to control the apparent size of a room through the judicious use of color.
3. How to help light a room with the aid of color.
4. How to style a room with color.
5. What colors are timely.
6. What varied psychological effects can be produced with colors.
7. What colors suggest advancing, balancing or receding action.
8. What colors produce warm, cool and cold temperature effects.
9. What symbolisms and meanings are most readily associated with various colors.

Obviously the proper applications of these specific aspects of color in its relation to the personalized needs of each individual home and room cannot be detailed here in their entirety. There are a few important factors deserving of general consideration, before any definite color choices can be properly considered for home decoration.

Basic Principles

1. Strong variations of reds, oranges, yellows, greens and blues should be avoided on large surfaces because they vibrate unpleasantly in big doses.
2. At least three colors should be used in the decorative scheme of a room in order to make it interesting.
3. When walls are not going to be finished in a uniform color in a room, it is a good idea to avoid using a dark colored wall next to a light colored area. Through contrast, the light color will appear to be darker along the joining edge and the dark color will appear correspondingly lighter in value. Consequently it is advisable to select colors of the same or nearly equal value for adjacent areas when large sections of color are to be utilized.

Exterior Color Styling

The Home Show edition of SMALL HOMES carried a very excellent article by Mr. Howard Ketcham on color styling the exterior of your house. It pointed out the subtle ingredients which mark the separation point between houses which appeal to us and others which impress us as drab and monotonous. A copy of this issue may be had by sending in 25c to National Homebuilders Bureau, Inc., 572 Madison Avenue, New York.

Red and bluish-green, brown and blue, purple and yellowish-green, purplish-blue and yellow are complementary colors. When complementaries are juxtaposed they intensify each other. That is, they appear deeper and richer. To prevent them from appearing unpleasant, there are several practical solutions for overcoming these hazards of strong color vibration when complementary colors are used full strength in such features as mouldings, small decorative accent areas, etc. For example, when a moulding in a strong color is used against a wall area of a contrasting color, the moulding should be separated from the background color by an edging of lighter color. Suppose we have a purplish-blue moulding or accent area to set off against a yellow wall. An outline of lighter yellow will help to make the moulding blend into the wall color with less clash. Gold ornamentation on any colored ground will stand out more legibly if it is outlined with black or dark brown.

A detail finished in a high value color will contrast properly against a foil in a dark color without the need for edging or outline providing the hue of each is identical (a pink, for example, against a maroon).

Bed or dressing table alcoves can be satisfactorily harmonized when treated in a different value of the same hue used for walls or in a complementary color of approximately the same value. Thus we see that there is art to the development of color legibility, and properly employed, this art serves to enable the eye to distinguish figures, patterns, etc., more readily one from another.

Color can be used to help intensify or subdue light! As such it is particularly serviceable in play-room areas where window limitations create a need for supplemental help such as light reflecting surfaces can afford. In this connection it is well to note that glossy paint colors are most efficient as light reflecting mediums. The following paint colors are listed in the order of their importance as reflectance values.

1. White
2. Pale Yellow, Ivory, Cream
3. Pink and Peach
4. Buff and Grey
5. Pale Green
6. Light Blue
7. Dark Blue
8. Dark Green
9. Maroon
10. Brown

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VISUAL MAGIC FOR YOUR NEW HOME

(Continued from page 287)

Every adult during the course of his life forms certain definite color likes and dislikes. Consequently, when choosing for a home, colors that will have to be lived with constantly for long periods of time, it is essential that hues be selected which pleasantly affect the inhabitants without irritation.

Certain colors exercise an exciting influence on the beholder. Reds, oranges and yellows are exciting colors. In addition, they are advancing in action and warm in temperature. As such, they are not ideal for engendering restful surroundings, but we suggest their use in play-room or recreation areas. Blue-green, blue, blue-purple and purple are tranquilizing, cool and receding colors that have their special appeal for rooms designed for quiet and rest. Green is soothing, cool and balancing. Consequently green is adaptable to the widest range of use, and variations of this hue can serve to decorate appropriately any room.

A chief aspect for consideration when planning color treatments is the purpose of the rooms. Bedrooms are sleep inducing when done in tranquilizing or soothing colors. Living rooms are functional when ornamented in stimulating colors, adaptable to varying moods. Dining rooms belong in colors that are appetizing-looking—luscious pinks, creams and greens are ideal; bars are effective when done in gay, convivial color variations. Kitchens are pleasant in activating, clean-looking colors—white, blue, green, ivory. Entrance halls best bespeak hospitality when decorated in cheerful yellows and yellowish-greens.

The dominant color area in any room is apt to be the carpet. Thus its color and character set the tone of the room. It must blend with other fittings and be appropriate in design. The carpet is usually the darkest color value in a room. The other room features range upward in color value with medium walls and light ceiling. The furniture and fabrics are usually supplied in intermediate tones.

Unless climatic conditions demand a definitely warm or cool atmosphere, the average room should maintain an interesting balance of warm and cool colors. There should also be a balance between light and dark tones. In this connection it will help the uninitiated if he visualizes a warm color as one that contains red and a cool color as one partaking of blue in its make-up.

All strong colors should be featured by the use of adjacent areas of more neutral color.

Walls and woodwork should be colored alike; if wall paper is selected, the background should be pale and the woodwork should be colored to match.

Where rooms open into each other they should be planned so that one color or variations of one color is dominant in both.

One of the most practical aids to creating the illusion of increased size in a room is to place a mirror on the wall opposite the windows. Thus more light will be reflected, tending to increase the apparent size of the room.

Styled house interiors today call for ceilings in a color different from the side wall but not dead white. A trend toward ceiling colors in values to match the walls is much in evidence. Light grey, light lemon, and pale blue are popular ceiling colors.

An increasing tendency toward carrying out one or two walls in one color, and the remaining walls in a different color is apparent in many sections of the country. The use of patterned wall paper in alcoves to contrast with walls in solid color has become popular. Light bluish-greens, light blue, medium lemon, and light beige are the most featured colors for walls today.

The beauty afforded home builders by the colorful low cost building materials now on the market are important elements in creating new interest and pleasure in home ownership.

NEW IDEAS to Beautify Your Home

Do you long to create in your home those delicate new wood-finishing effects in lovely modern shades that have a soft, satiny sheen—some *even lighter than natural?*

You can make your home strikingly different—achieve delightful new decorative effects both inside and outside—with BREINIG BROTHERS Modern Wood Finishes.

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Write our Wood Finishes Advisory Bureau for help in selecting correct finishes and colors for solid and plywoods. State kinds of wood involved, architect's and contractor's names, etc. No obligation for this service.

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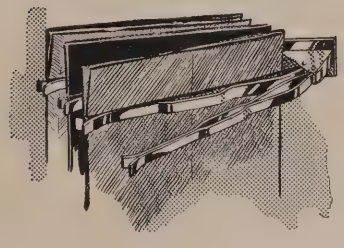
CLEVER CLOSETS...

How to Get More Space and Keep Apparel Orderly..

NARROW BEDROOM CLOSET becomes ever so much more handy as a result of a few inexpensive fixtures. Note the sliding clothing carrier that brings clothes out into the open. On the door: hat rack, folding tie rack, and shoe racks, make use of space ordinarily wasted.

CLOSETS are the true test of any housekeeper's ingenuity and pride in her home. Neat ones reflect care and proper consideration of clothes. Cluttered closets are dead give-aways, like finding dirt under the carpet corners.

But it's so hard, you say, to keep closets neat and orderly when they're so small and you have so much apparel that must go in them. That's true. Even in the most modern homes, many closets are still small and frequently of such odd shapes, it is difficult to use them to the best advantage. Yet there is a happy solution to the closet problem every woman faces... a complete and inexpensive answer to Mrs. America's No. 1 pet peeve.



This novel fixture has four clamp arms which swing independently. Each holds a trouser or skirt full length so as to maintain press. It's chrome finished and very compact.

Today, smart home owners and apartment dwellers are equipping their closets with inexpensive, smartly chrome finished fixtures which provide a handy place for each apparel item, and by making the most efficient use of *all* available space, practically double the capacity of any closet regardless of size or shape.

For example, why not make use of the back of the closet doors? You'll be amazed at the convenient gadgets which can be attached. There are hat racks which hold as many as six hats on curved brim-fitting metal rests that help preserve their shape and looks. Surely your hall closet needs one of these to take care of guests' hats as well as your own. Shoe racks keep shoes up off the floor, and save scuffing and shoe shine costs. One K-Venience tie rack, for example, holds 36 ties, each in a separate space, and twice as many by doubling up. What man wouldn't want that convenient aid to speedier dressing and for examining his collection?

For the small narrow closets, there are clothing carriers, of various sizes, which slide in and out of the closet on ball-bearing rollers. In this way, you can bring your entire collection of suits or dresses out into the light of the room for quick selection. Trouser - skirt hangers save lots of cleaning and pressing bills. The hangers come with several swing independent clamps, each holding a pair of trousers, full length, by the cuffs, so that wrinkles pull out naturally.

Other essential items include extension closet rods, wishbone garment hangers, towel racks, umbrella and cane holders, and fur rings. All attach easily and securely, yet can be removed and reinstalled when you move, thus making them doubly economical.

GET MORE CLOSET ROOM!

★ Keep Closets Tidy

★ Keep Shoes Off The Floor

★ Keep Trousers In Press

★ Keep All Apparel Handy

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These clever, modern fixtures make the most of any closet size or shape . . . keep clothes orderly . . . speed dressing . . . save cleaning and pressing bills. Over 40 sturdy chrome-finished items—shoe, hat, tie and towel racks; clothing carriers, trouser-skirt hangers, etc. Attach easily to closet doors or walls. At department and hardware stores or sent direct. Write for FREE CATALOG describing these useful K-Venience fixtures, and giving suggested installation plans which will help you eliminate your closet worries. MAIL COUPON NOW!

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( ) Send free K-Venience Catalog and space-saving closet plans.

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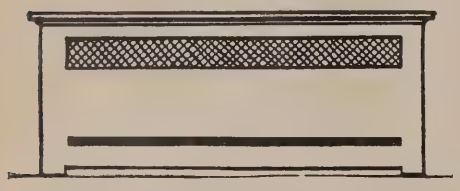
MAKE IT AT HOME . . . AND SAVE MONEY!

Build It Yourself or Use a Local Handy Man

THE editors have been impressed with the number of letters from readers asking for things that can be built inexpensively at home. We carefully studied these and are offering the following as the things most often requested. This MAKE IT AT HOME AND SAVE MONEY will be a regular feature of SMALL HOMES from now on and we will be glad to have your suggestions on what you would like on this page in the next issue.

Complete instructions, blueprints, specifications and quantity lists to build (or have built) the following high spots for your home and garden are available:



RADIATOR ENCLOSURE

These will give your home a finished look. They are easy to build and designed so that they will not interfere with the proper functioning of the radiator.....*$1.00*

LETTER-BOXES

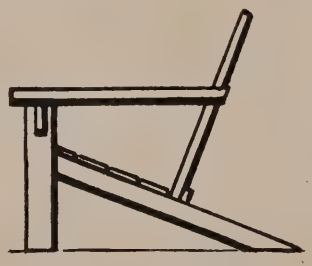
Sturdy and properly proportioned receptacles that are as amusing as practical. Designed for both wall and post attachment, they are easy to construct and put in place..*$0.50*

SETTLES

To grace the entrance or flank the terrace. Variations in architectural design are shown so that these benches will conform to the general style of your home....*$1.00*

ARBOR

Any size arbor for lawn or garden may be developed from the instructions. Can be a low grape arbor or high for roses—or both. An excellent means of cutting off an unsightly view.....*$0.50*



LAWN CHAIRS

These can be made in a few hours with only the hammer and saw. Comfortable and solid furniture in which to lounge on the lawn or for use on terrace or sun deck.....*$0.50*

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A formula for building a concrete, brick or flagstone terrace which will not crack or disintegrate. This increases the value of your house..*$1.00*

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The kind you have always wanted but could not afford. Designed so that the shelves are adjustable for any size of book, and to fit into any space available in room.....*$0.50*

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Dine in the open. Entertain your friends informally by cooking outdoors. Complete instructions for building a full-size unit with oven and grill. Details are for brick construction.....*$0.25*

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Insure privacy and provide attractive background for your flower beds and lawn furniture. Suitable for vines, climbing roses, etc. Can be made in any size.....*$0.25*

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☐ Book-Cases	.50	☐ Trellis	.25
☐ Settles	1.00	☐ Terrace	1.00
☐ Letter-Boxes	.50	☐ Flagstone	.25
☐ Lawn Chairs	.50	☐ Tool Shed	2.00
☐ Arbor	.50	☐ All eleven for	6.00

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THE DEFENSE GARDEN . . .

PLANNING YOUR LOT CAREFULLY ADDS VALUE TO YOUR HOME

WELL-PLANNED home grounds, even though small, add a pleasant room to the house. As a nation we need the quieting, the stabilizing type of pleasure which we may find in our own home grounds. Furthermore, good landscaping adds far more to the value of a house than the cost of putting it in.

Your home grounds should consist of three parts—front area, service area, and garden area.

The front area, under today's traffic conditions, is usually not a living area; think of it as a setting for the house, unadorned except for a few shade trees, foundation planting, border shrubbery, and a beautiful green lawn.

Lawns are no exception to the general rule—they cannot be better than the materials which go into their construction. First, a word of warning—many builders economize on the quality of grass seed. If possible you should plant your own lawn. Let the builder have the lot graded with good top soil and ready for planting the lawn. Then apply fertilizer, preferably a special brand for enriching lawns. Lime, also may be necessary to sweeten the soil. Buy quality grass seeds — a mixture of rapid growing grasses, and those slower grasses that produce the finest and strongest turf. A lawn made from a well-balanced mixture grows richer and smoother with age. There are grasses that grow in the shade in their wild state, and these are best to plant around your trees. Trees take more than their share of the food and moisture from the soil, and the shade they create tends to produce a sour soil condition. Ordinary lawn seed mixtures cannot thrive under such conditions. Therefore, a special mixture for shaded areas is desirable. Under normal conditions the lawn will be ready to be cut four weeks after the sowing.

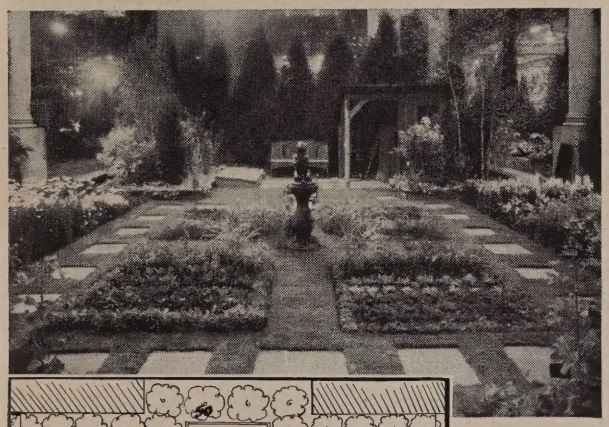
In addition to humus in the form of peat moss for fertilizing the lawn each season, a sprinkler should be used during dry periods.

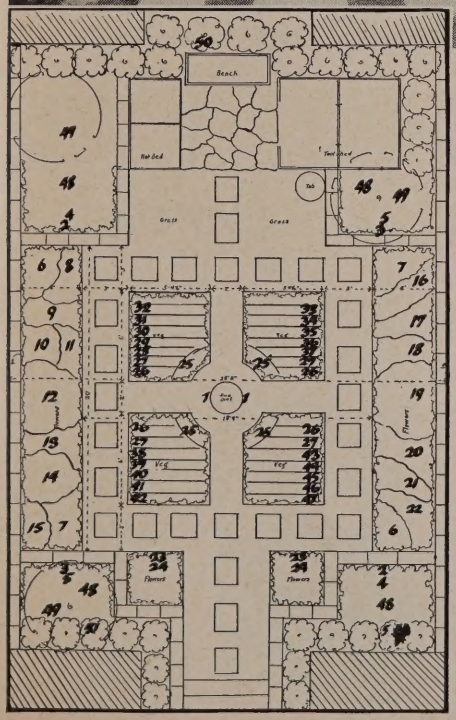
The service area, which should be as small as possible, includes the kitchen and garage areas, the area of the coal chute and basement door. This area should also include a drying yard for the laundry. It is important that you plan your driveway so that it will be near the coal bin window.

The third area is the garden area.

Today, the Nation's Defense comes first. One of the most vital needs of the world today is food. With the shortage of labor on farms, caused primarily by the draft and the shifting of population to defense areas, this problem will become more acute next year. Therefore, if each citizen would plant part of his own back yard in vegetables, bush fruits and fruit trees, he would serve a double purpose of reducing his grocery bill and aiding Uncle Sam.

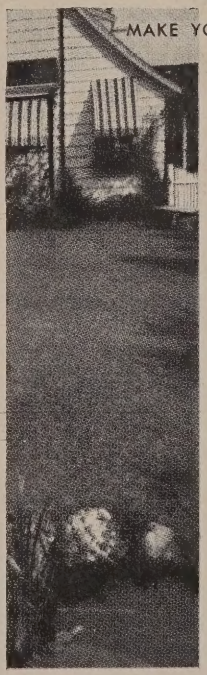
One of the leading seed companies had a Defense Garden at the New York Flower Show this spring. This is pictured here, with a layout and a key and list of the vegetables and flowers used to make this attractive back yard.





The numbers shown on the plan, are a key to the following list of flowers, vegetables, shrubs and trees. The Vegetable Beds were bordered with Herbs including: Catnip, Chives, Mint, Parsley, Rosemary, Sage, Sweet Marjoram, Tansy, Thyme, Winter Savory and Wormwood.

1. Cobaea Scandens (Mexico) Vine on Fence and Sundial. 2. Nasturtium Scarlet Gleam (Peru). 3. Nasturtium Golden Gleam (Peru). 4. Marigold Golden Harmony (Mexico). 5. Ageratum Blue Perfection (Mexico). 6. Marigold Golden Eaglet (Mexico). 7. Marigold Golden Crown (Mexico). 8. Verbena Spectrum Red (Argentina). 9. Nemesia Strumosa White. 10. Tithonia Speciosa (Mexico). 11. Cosmos Orange Flare (Mexico). 12. Acroclinium Sensation. 13. Nemesia Strumosa Orange. 14. Nicotiana Crimson Bedder (Brazil). 15. Salpiglossis Emperor (Chile). 16. Nemesia Strumosa Blue. 17. Antirrhinum Madonna. 18. Antirrhinum Nelrose. 19. Schizanthus Wisetonensis (Chile). 20. Linaria Excelsior. 21. Petunia Silver Blue (Argentina). 22. Argemone Prickly Poppy (Mexico). 23. Petunia Glow. 24. Hollyhock Indian Spring. 25. Sweet Corn, Cream O'Gold. 26. Peas, Laxton's Progress. 27. Beans, Tendergreen. 28. Onion, White Globe. 29. Cabbage, Mammoth Rock Red. 30. Carrot, Coreless. 31. Beet, Early Wonder. 32. Chervil, French Curled. 33. Radish, Scarlet Globe. 34. Beet, Detroit Dark Red. 35. Carrot, Tendersweet. 36. Leek, American Flag. 37. Onion, White Globe. 38. Swiss Chard, Green Plume. 39. Kale, Blue Scotch. 40. Kohlrabi, Early White Vienna. 41. Turnip, Purple Top White Globe. 42. Spinach, Bloomsdale Savoy. 43. Lettuce, May King. 44. Lettuce, Grand Rapids. 45. Endive, Golden Heart. 46. Cress, Extra Curled. 47. Spinach, Long Season. 48. Assorted Flowering Shrubs. 49. Birch Trees. 50. Cedars. 51. Arbor Vitaes.



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by MARTHA WOOD

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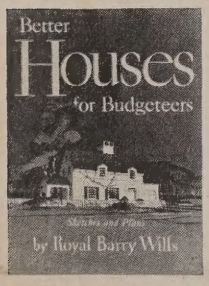

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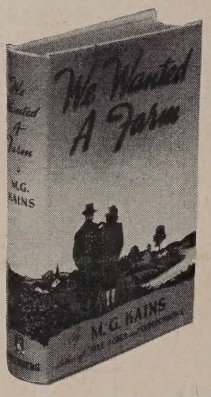

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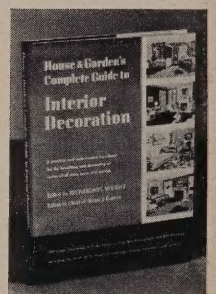

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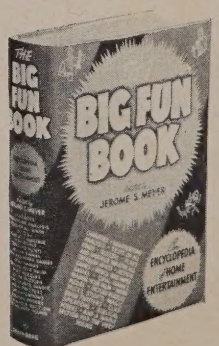

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